From the North British Review.

Results of Astronomical Observations made during the years 1834, 5, 6, 7, 8, *at the Cape of Good Hope, being the completion of a Telescopic Survey of the whole surface of the visible heavens, commenced in* 1825. By Sir JOHN HERSCHEL, Bart., K. H., D. C. L., F. R. S. London and Edinburgh.

In the history of Astronomical Discovery there shine no brighter names than those of Sir William and Sir John Herschel—the father and the son. It is rare that the intellectual mantle of the parent lights upon the child. By no culture, however skilful, and no anxieties, however earnest, can we transmit to our successors the qualities or the capacities of the mind. The eagle eye, the active limb, the giant frame, and the "form divine"—the gifts of our mortal being, are frequently conveyed by natural descent, and may be numbered even among the rights of primogeniture; but the higher developments of reason and fancy, the bright coruscations of the soul, have never been ranked among the claims or the accidents of birth. The gifts of fortune which we inherit or acquire, have been placed more immediately at our disposal, and in many cases have been handed down unimpaired to distant generations; but Providence has reserved for its own distribution, those transcendental powers which give omnipotence to genius, and constitute its possessor the high priest of nature, or the vicegerent of Heaven. In a destiny so lofty, the father and the son have been rarely associated; and in the very few cases in which a joint commission has been issued to them, it has generally been to work in different spheres, or at different levels. In the universe of mind, the phenomenon of a double star is more rare than its prototype in the firmament, and when it does appear we watch its phases and its mutations with a corresponding interest. The case of the two Herschels is a remarkable one, and may appear an exception to our general law. The father, however, was not called to the survey of the heavens, till he had passed the middle period of life, and it was but a just arrangement, that the son in his youth and manhood, should continue and complete the labors of his sire. The records of Astronomy do not emblazon a more glorious day than that, in which the semidiurnal arc of the father was succeeded by the semidiurnal arc of the son. No sooner had the evening luminary disappeared amid the gorgeous magnificence of the west, than the morning star arose, bright and cloudless in its appointed course.

It has long been a subject of regret to the astronomical world, that in our language no extended account has yet been published of the life and discoveries of Sir William Herschel. With the exception of a short Biographical Memoir,* and a popular abstract of his astronomical observations on the nebulæ and double stars, and on the bodies of our own system,† no suitable account of his labors has appeared even in our larger treatises on astronomy, and general readers have, therefore, no adequate idea of the value and extent of his discoveries.‡ Though his scientific studies did not, as we have already stated, commence till he had reached the middle period of life, yet he pursued them, under difficulties of no ordinary kind, with all the ardor of youthful devotion, and with that dauntless and indefatigable perseverance which never fails of success. Every step indeed of his astronomical career was marked with discoveries equally interesting and unexpected. New planets and new satellites, were successively added to our own solar system. Thousands of nebulæ and double stars were discovered in the sidereal firmament, and in those remote regions of space where the imagination had hitherto scarcely dared to wander, and where the stars in countless multitudes seemed to be fixed in absolute immobility, the physical astronomer was directed to new systems of worlds—binary, ternary, and multiple—exhibiting the general phenomena of annual and diurnal rotation, and rendering it probable that the law of gravitation extended to the remotest corners of space. His invention of instruments, and of new methods of observation, was no less surprising than the wonders which they disclosed. Obstacles that other men had found insuperable he speedily surmounted. The telescope which Galileo held in his hand as a toy, became under Sir William Herschel's direction a stupendous machine, which supported the astronomer himself, and even his friends, and which mechanical power was requisite even to move. There was in short no continuity between his inventions and discoveries, and those of preceding astronomers. He adventured upon a flight which left them at an immeasurable distance, and he penetrated into regions where the ablest of his successors have had some difficulty in following him.

As "the telescopic survey of the whole surface of the sidereal heavens," contained in the great work of Sir John Herschel, which is now before us, is a continuation and completion of the labors of his father, we shall endeavor to give our readers a brief and general account of the discoveries of

* *Edinburgh Philosophical Journal*, April, 1823, vol. viii., pp. 209–226.

† *Edinburgh Encyclopædia*, Art. *Astronomy*.

‡ A very interesting and valuable account of the Life and works of Sir W. Herschel, by M. Arago, was published in the *Annuaire* for 1842. It contains a full and critical analysis of his discoveries, and is distinguished by the eloquence and learning which characterize the writings of that illustrious philosopher.

Sir William, interspersed with a few notices of the principal events of his life.

Sir William Herschel was born in the city of Hanover on the 15th November, 1738. His father, who was a professor of music, educated his five sons in the same art; but William, who was the second, after exercising his profession for about five years, in Hanover, resolved to push his fortune in England, where he arrived about the end of the year 1759. Although he was enthusiastically devoted to his profession, and pursued it with such success, as to draw from it an income considerably above his wants, his ardent mind was occasionally devoted to still higher objects. When he was resident at Halifax he acquired, by his own application, a considerable knowledge of mathematics, and having studied astronomy and optics, in the popular writings of Ferguson, he was anxious to witness with his own eyes the wonders of the planetary system. Having received from a friend the loan of a telescope, two feet in focal length, he directed it to the heavens, and was so delighted with the actual sight of phenomena, which he had previously known only from books, that he commissioned a friend to purchase for him in London a telescope with a high magnifying power. Fortunately for science, the price of such an instrument greatly exceeded his means, and he immediately resolved to construct a telescope with his own hands. After encountering the difficulties which every amateur at first experiences in the casting, grinding, and polishing of metallic specula for reflecting telescopes, he completed in 1776 a reflecting instrument, *five feet* in focal length, with which he was able to observe the ring of Saturn and the satellites and belts of Jupiter. This telescope was completed when he resided at Bath, where he acquired by degrees, and at his leisure hours, that practical knowledge of optics and mechanics which was necessary for such a task. His experience in this scientific art was of the most remarkable kind. He had constructed for himself several two-feet, five-feet, seven-feet, ten-feet, and twenty-feet Newtonian telescopes, besides others of the Gregorian form of eight-inches, twelve-inches, two-feet, three-feet, five-feet, and ten-feet focal length. His way of executing these instruments, at this time, when the direct method, of giving the figure of any one of the conic sections to specula, was yet unknown to him, was to cast many mirrors of each sort, to grind and polish them as accurately as he could, and then, after selecting and preserving the best of them for use, he put the rest aside to be repolished. In this way he executed no fewer than *two hundred* specula, seven feet in focal length, *one hundred and fifty*, ten feet in focal length, and about *eighty* twenty feet in focal length, besides a great number of specula of the Gregorian form, and of the construction of Dr. Smith's reflecting microscope. His mechanical labors were contemporaneous with his optical ones. He invented a great number of stands for these telescopes, contriving and delineating them of different forms, and executing the most promising of the designs. "To these labors," he himself informs us, we "owe my seven-feet Newtonian telescope stand, which was brought to its present convenient construction about seventeen years ago, (in 1778,) a description and engraving of which I intend to take some future opportunity of presenting to the Royal Society. In the year 1781, I began also to construct a thirty feet aerial reflector, and after having invented and executed a stand for it, I cast the mirror which was moulded up so as to come out thirty-six inches in diameter. The composition of my metal being a little too brittle, it cracked in the cooling. I cast it a second time, but here the furnace which I had built in my house for the purpose gave way, and the metal ran into the fire."*

Furnished with instruments so numerous and powerful, Mr. Herschel had now the means of surveying the heavens, which were possessed by no other astronomer in any of the fixed observatories of Europe. With the earnings of a profession not the most lucrative, and by the energy of his own mind, and the labor of his own hands, had this private individual done more for the prosecution of astronomical discovery than all the sovereigns of Europe combined; and many years had not elapsed before he had outstripped in discovery men educated in all the mysteries of science, and supported by all the munificence of princes. The earliest of his observations which he deemed worthy of being published, were made between 1776 and 1780, and related to the *Periodical star* o, in *Collo Ceti*. They were communicated to the royal society by Dr. Watson, junior, of Bath, and read on the 11th May, 1783. This star was discovered in 1596 by Fabricius, and was described as appearing and disappearing periodically seven times in six years, (its period being three hundred and thirty-four days) continuing in the greatest lustre for fifteen days.

In these observations, which are not of very great importance, Mr. Herschel measured with a micrometer the distance of the periodical star from a very obscure telescopic star which preceded it, and he used a power of 449, his usual power being only 222.† This paper was accompanied by another, read at the same meeting, "*On the Mountains of the Moon*," in which he draws the conclusion, that the height of the Lunar Mountains has, in general, been greatly overrated, and that,

*No account of the aerial stand here mentioned, or of the stand of the seven-feet reflector, was ever published by their inventor.

† This very extraordinary star, known by the name of *Mera*, has a *reddish yellow* color, which has been supposed to vary with its magnitude; but Captain Smith always found it to be reddish when viewed through his telescope. It has a companion, distant 116 seconds, of a pale *lilac* color, whose angle of position is 88° 9′; its variations being from the second magnitude to invisibility and its place 2h 11′ 16″ R. ascension, and 3° 42′ 39″ S. declination. Count De Hahn thought he saw another companion. Sir W. Herschel conjectured that a rapid change had taken place between the two stars; but Captain Smith is inclined to think that there has been little or no movement beyond what may be ascribed to the proper motions of o *Ceti* in space.—See Smith's *Celestial Cycle*, vol. ii., pp. 59, 60.

with the exception of a few, ($1\frac{1}{2}$ to $1\frac{3}{4}$ miles high,) "the generality do not exceed half a mile in their perpendicular elevation."*

The next communication of our author to the Royal Society, was a letter to Dr. William Watson, entitled, "Observations on the Rotation of the Planets round their axes, made with a view to determine whether the Earth's diurnal motion is perfectly equable." In these observations, by which Jupiter's diurnal rotation was found to be $9^h\ 51'\ 19''$. and that of Mars, $24^h\ 39'\ 23''$, Mr. Herschel employed a twenty-feet, a ten-feet, and a seven-feet Newtonian reflector; and he obtained his time with a brass quadrant of two feet radius, carrying a telescope magnifying forty times, and by two very good time-pieces, one having a steel pendulum rod, and the other a compound pendulum of brass and iron.

In the year 1781, Mr. Herschel was engaged in a series of observations "On the Parallax of the Fixed Stars," in which he used magnifying powers of 227, 460, 932, 1536, and 2010, and on the 13th March, when he was examining the small stars in the neighborhood of H. *Geminorum*, he discovered what he thought to be a comet, and after observing it till the 19th of April, he communicated "An account of a Comet" to the Royal Society, on the 26th of the same month. In this paper, he gives its distance from certain telescopic stars in its vicinity, and by means of a *micrometer* for taking the angle of position, described at the end of the paper, he obtained measures of its angle of position with the same fixed star. Although M. Messier, to whom Mr. Herschel communicated his observations, and who had with some difficulty observed it, speaks of it in his reply as *a star* or a comet, yet neither of them suspected it to be a planet. Mr. Herschel, indeed, himself speaks of it as "a moving star, which he was happy to surrender to the care of the astronomer royal and others."

Before the close of the year 1781, Mr. Herschel, in a letter to Sir Joseph Banks, announced to the Royal Society, that, "by the observations of the most eminent astronomers in Europe, the new star which he had the honor of pointing out to them in March, 1781, is a primary planet of our Solar System;" and in gratitude to his Majesty George III., "to whose unlimited bounty he owed everything," he gave it the name of the GEORGIUM SIDUS, a compliment which astronomers in every part of the world have refused to pay. La Lande, and others, gave it the more appropriate name of *Herschel;* but the uniformity of astronomical nomenclature demanded another name, and the appellation of *Uranus*, sanctioned by more recent discussions, was given to the new planet.

This important discovery, by which the limits of the Solar System were extended to nearly double their former amount, was hailed by the astronomers of every country, and the highest expectations were formed of the future labors of Mr. Herschel. The Royal Society of London elected him a fellow of their body. His Majesty George III. did himself the honor of granting him a salary of £300 a year, so as to enable him to devote his time to astronomical research; and all the scientific bodies in Europe successively admitted him into the list of their members.

With the fine telescopes in his possession, Mr. Herschel began in October, 1781, to make a series of observations on the light, diameter, and magnitude of the new planet; and in his paper on this subject read at the Royal Society on the 7th Dec., 1782, he described the *dark* and *lucid disc* and *periphery micrometers* by which these observations were made. With this apparatus, by means of which one eye, looking into the telescope, throws the magnified image of a planet or comet upon, or near, lucid discs seen by the other eye, he found the diameter of the Georgium Sidus to be four seconds; and from the distance of the planet from the sun, as calculated and sent to him by La Lande, (18·913—that of the earth being 1,) he found its diameter to be 4·454 times that of the earth.

The researches of Mr. Herschel on the Parallax of the Fixed Stars, which we have already mentioned, were chiefly of a speculative nature, and the result of them was published in the *Philosophical Transactions* for 1782. The method first pointed out by Galileo, and followed by Flamstead and Bradley, of measuring the zenith distances of two stars, was regarded by Mr. Herschel as liable to various sources of error; and he was of opinion that though Bradley regarded the maximum parallax as not exceeding $1''$, yet "the stars of the first magnitude might still have a parallax of several seconds." The method which he substituted, and which had been originally suggested by Galileo, in his *Systema Cosmicum*, consisted in employing two stars as near to each other as possible, and differing as much in magnitude as could be found, and determining their exact place at the two opposite points of the earth's annual orbit. The parallax of the stars was then to be computed by a theory founded on probabilities, and involving the two postulates: 1. That the stars are, "one with another, about the size of the sun; and, 2. That the difference of their apparent magnitudes is owing to their different distances;" so that a star of the second, third, or fourth magnitude is two, three, or four times as far off as one of the first. This method, ingenious as it is, has not led to any results on which confidence can be placed. The postulates which it involves were contrary to all analogy, and have been completely disproved by the only measures of parallax which have been recently obtained. But like many other speculations, the attempt to prove or to apply them led to results more important than those which they directly contemplated. In searching for double stars suitable for his purpose, Mr. Herschel was led to the formation of those magnificent catalogues of double stars by which he enriched astronomy, and those interesting results respecting the move-

* It has been since proved that there are several mountains nearly *twice* the height of Mont Blanc.

ments and periods of binary systems, which now form the most interesting portion of sidereal astronomy.

To us who are in possession of the researches on double stars, which we owe to Mr. Herschel and his son, to Sir James South, and M. Struve, it is interesting to mark the first steps in this great inquiry.

"I took pains," says Mr. Herschel, "to find out what double stars had been recorded by astronomers; but my situation permitted me not to consult extensive libraries, nor indeed was it very material. For as I intended to view the heavens myself, Nature—that great volume—appeared to me to contain the best catalogue upon this occasion. However, I remembered that the star in the head of Castor, that in the breast of the Virgin, and the first star in Aries, had been mentioned by Cassini as double stars. I also found that the nebula in Orion was marked in Huygens' *Systema Saturnium* as containing seven stars, three of which (now known to be *four*) are very near together. With *this small stock I began*, and, in the course of a few years' observations, have collected the stars contained in my catalogue. I find, with great pleasure, that a very excellent observer, (Mr. Pigott,) has also, though unknown to me, met with *three* of those stars that will be found in my catalogue; and upon this occasion, I also beg leave to observe, that the astronomer-royal showed me, among other objects, *α Hercules* as a double star, which he had discovered some years ago. The Rev. Mr. Hornsby also, in a conversation on the subject of the stars that have a proper motion, mentioned *π Bootis* as a double star. It is a *little hard upon young astronomers* to be obliged to discover over again what has already been discovered. However, the pleasure that attended the view when I first saw these stars, has made some amends for not knowing they had been seen before me."*

Mr. Herschel's first *Catalogue of Double Stars* was read at the Royal Society on the 10th January, 1787. It contains 269 double stars, 227 of which had not been noticed by any other person. It gives the comparative size of the stars, their color, their distances, (as measured by a *Lamp Micrometer*,† exhibiting two movable lights, with whose distance seen by the unassisted eye the distance of the stars seen in the telescope was compared,) their angle of position, and the dates of the observation. The catalogue, which is divided into six classes, contains not only double stars, but also those that are triple, double-double, quadruple, double-triple, and multiple.

Mr. Herschel had now removed to Datchet, near Windsor, where he carried on his observations under the immediate patronage of the king, with new zeal and corresponding success. Towards the end of 1782, he completed his interesting paper —"*On the proper motion of the Sun and the Solar System, with an account of several changes that have happened among the fixed stars since the time of Mr. Flamstead.*" In this paper, he notices, 1. The stars that have been lost, or undergone some capital change since Flamstead's time; 2. Those that have changed their magnitude; 3. Those that have newly become visible; and the results which he obtained were drawn from a review of all the stars in Flamstead's catalogue, as far as the twelfth magnitude, "to the amount of a great many thousands of stars." Those changes which arise from a proper motion of the star, and a variation of magnitude, he suspects may be owing to every star in the heavens being more or less in motion; some, especially in slow motions, arising from their revolving round *a large opaque body*—the stars undergoing occasional occultation, or presenting to us large spots in their rotatory movements. Hence he is led to believe, what Tobias Mayer had previously maintained, that the Sun and Solar System have analogous motions, and are advancing to a certain part of the heavens; and he found that this part was in the constellation Hercules, near the star λ, or a point somewhat further to the north.

Having finished, in the year 1783, a very good twenty-feet reflector, with a large aperture, he employed it in studying the remarkable luminous spots at the pole of the planet Mars; and he published the results of his observations in the *Philosophical Transactions* of 1784. By means of these spots, he found that the axis of Mars was inclined to the ecliptic 59° 42′, and that its node was in 17° 47′ of Pisces, and he determined the ratio of its polar and equatorial diameters to be as 15 to 16.

Towards the end of 1784, Mr. Herschel completed a second catalogue, containing 434 double stars; and in June, 1784, and February, 1785, he communicated to the Royal Society two papers "On the Construction of the Heavens." By means of his twenty feet telescope, with an aperture of $18\frac{7}{10}$ inches, and placed meridionally, he resolved into stars the nebulæ discovered by Messier and Mechain, and also part of the Milky Way; and he discovered no fewer than 466 new nebulæ and clusters of stars, which were not within the reach of the best common telescopes then in use. In pursuing these observations, he was led to the remarkable speculation, founded wholly on optical considerations, that as the Milky Way "seemed to encompass the whole heavens," it might be regarded as an immense cluster of stars; and that our sun, with his system of planets, was in all probability placed within it, but "perhaps not in the very centre of its thickness." In order to determine the sun's place in this sidereal stratum, he *gaged the heavens*, or ascertained the quantity of stars, or the thickness of the stratum, in various directions. In his paper of 1785, he gives a long table of star-gages; and supposing the stars to be nearly equally scattered, and their numbers in a field of view of a known angular diameter to be given, he determines the length of the visual ray, and gives a section of the Milky Way, or nebulæ, (resembling a fish with a long open mouth,) to which our system be-

* After his catalogue was in the possession of the Royal Society, Mr. Herschel received the fourth volume of the *Acta Academiæ Theodoro-Palatinæ*, containing a paper by Tobias Mayer, giving "a pretty large list of double stars," some of which were the same with those in his catalogue, while 31 were not contained in it.

† Described in the *Philosophical Transactions*, 1782, p. 163.

longs, and near the centre of which it is placed. We regret that we cannot allow ourselves to adopt this noble and ingenious speculation ;* and there is sufficient evidence to induce us to believe, as the celebrated Russian astronomer, M. F. G. W. Struve, has stated, that Mr. Herschel himself was obliged to abandon it. He found, even with his largest telescope, that the Milky Way could not be sounded ; and as the same uncertainty prevails respecting the limits of the visible stars in all other directions of the celestial vault, M. Struve draws the conclusion, that "if we regard all the fixed stars that surround the sun as forming a great system—that of the Milky Way—*we are perfectly ignorant of its extent, and cannot form the least idea of this immense system.*"† Having, therefore, no visible limits, it cannot be regarded as a nebula,‡ according to the hypothesis of Mr Herschel. But though the Milky Way is a system whose form and extent is not, and probably never will be, determined, yet, as Struve observes, there is evidently a certain law of condensation towards a principal plane, which law he has endeavored to determine. Lambert had imagined that the deviation of the Milky Way from the form of a great circle, was owing to the lateral position of the sun within it. M. Struve, however, rejects this explanation, and is of opinion that the most condensed stratum of the stars does not form a perfect plane, but rather a broken plane, (plan brisé,) or perhaps this stratum occurs in two planes inclined 10° to each other, and whose intersection is placed nearly in the plane of the celestial equator, the sun being at a small distance from this line of intersection towards the point 13 h. of the equator.§

In 1786 Dr. Herschel, who had been honored with the degree of Doctor of Laws from the University of Oxford, communicated to the Royal Society *a catalogue of* 1000 *new nebulæ and clusters of stars*, which he had observed since 1783, with his twenty-feet reflector; and this was followed, in 1789, with another *catalogue of a second thousand nebulæ*. In these remarkable memoirs he regards the round clusters and nebulæ, in which there is an apparent condensation towards a centre, as clusters or nebulæ in the act of formation. He supposes that a central power resides in the brightest portion ; that the clusters which have the most perfect spherical forms have been longest exposed to the action of these forces ; and that we may judge of the relative age and maturity of a sidereal system from the disposition of its component parts ; while what he calls planetary nebulæ, where the compression is more equal, may be regarded as very aged, and approaching to a period of change or dissolution.

These views, ingenious though they be, have not been confirmed by subsequent observers. The nebular hypothesis to which they led, and which has been carried to such an unwarrantable extent in our own day, has been refuted by the discoveries of the Earl of Rosse ; and there is reason to believe that it has been renounced by Sir John Herschel himself.*

The interesting subject of the Construction of the Heavens was pursued by Dr. Herschel during the rest of his life, and his observations are recorded in ten memoirs published in the *Philosophical Transactions* for 1791, 1794, 1796, 1799, 1802, 1806, 1811, 1814, 1817, and 1818.

Having already, in other articles, given an account of the great 40 feet telescope constructed by Dr. Herschel, and of the various discoveries which he made respecting the planets and satellites of our own system,† we must bring to a close this brief notice of his sidereal labors. In the year 1816, when in the 79th year of his age, the prince regent presented him with the decoration of the Guelphic order of knighthood. In 1820, he was elected president of the Astronomical Society, and in their Transactions, in 1821, he published an interesting memoir *On the places of* 145 *double stars*. This paper was the last which he lived to publish. His health had begun to decline, and on the 24th August, 1822, he sank under the infirmities of age, having completed his 84th year. He was survived by his widow Lady Herschel, by his sister Miss Caroline Herschel,‡ and by an only son, the present Sir John Herschel, whose labors and discoveries in sidereal astronomy we shall now proceed to lay before our readers.

After the death of his father, Sir John Herschel had directed his attention principally to the science of opties, but particularly to that branch of it which relates to the double refraction and polarization of light. In this research, he obtained many new and highly important results, which are recorded in his *Treatise on Light*, published in the *Encyclopædia Metropolitana*, and certainly one of the most valuable works on that subject which has ever been written. Astronomy, however, had a higher claim upon his genius ; and having inherited telescopes of great magnitude and power, and been initiated into the difficult art of constructing them, he was naturally led to quit the field of optical science, and to cultivate the loftier domain of sidereal astronomy. He had proposed to himself the arduous task of reëxamining the nebulæ and clusters of stars which had been discovered by his father in his "sweeps of the heavens," and recorded in the three catalogues which, as we have already seen, he presented to the Royal Society in the years 1786, 1787, 1802, and he began to execute it in the year 1825. In this reëxamination he spent *eight years*, and he has given the results of it in a catalogue published in the *Philosophical Transactions* for 1832. This

* See review of *Kosmos* No. VII, pp. 228–30.

† In his memoirs of 1811 and 1817, Mr. Herschel abandons altogether his postulate of the equal distribution of stars in space.

‡ Etudes d'Astronomie Stellaire, par F. G. W. Struve. St. Petersbourg, 1847. p. 63.

§ Etudes d'Astronomie Stellaire, par F. G. W. Struve. St. Petersbourg, 1847. p. 82.

* North British Review, No. VI., p. 477, and No. VIII., p. 490.

† North British Review, No. III., pp. 183–189; No. VII., Art. VIII *passim*, and No. XI., Art. VIII. *passim*.

‡ Miss Caroline Herschel died at Hanover on the 9th of January, in the 98th year of her age.

catalogue contains 2306 nebulæ and clusters of stars, of which 1781 are identical with those described by his father, and with those published by Messier and Struve. The number of new nebulæ and clusters discovered by himself was 525. During this reëxamination, he observed a great number of double stars, and took their places, to the amount of between *three* and *four thousand*, all of which are described in the second, third, fourth, sixth, and ninth volumes of the memoirs of the Astronomical Society of London.

These observations were made with a Newtonian telescope of 20 feet focus, and 18¼ inches aperture, and having acquired by practice a "sufficient mastery of the instrument," and "of the delicate process of polishing the specula," he conceived the noble idea of attempting to complete the survey of the whole surface of the heavens; and, with this view, of "transporting into the other hemisphere the same instrument which had been employed in this, so as to give a unity to the results of both portions of the survey, and to render them comparable with each other."

The Cape of Good Hope was selected as the most favorable locality for carrying on this survey; and having fitted up the instruments and packed them carefully for the voyage, he left England, with his family, on the 13th November, 1833, and landed at Capetown on the 16th January, 1834, having providentially escaped from an awful hurricane to which he would have been exposed had his voyage been delayed. The spot which Sir John selected was the grounds and mansion of a Dutch proprietor, the name of which was Feldhausen, "a spot charmingly situated on the eastern side of the last gentle slope at the base of the Table Mountain." During the erection of the instruments, Sir John resided at Welterfrieden, and so quickly were his plans completed, that on the 22d of February, 1834, he was enabled to gratify his curiosity by viewing, with his 20 feet reflector, *α Crucis*, the interesting nebula about *η Argus*, and other remarkable objects; and on the evening of the 5th March, to begin a regular series of observations. The observatory thus completed was situated in south lat. 33° 58′ 56 55″, and long. 22° 46′ 9″.11 east from Greenwich, and its altitude was 142 feet above the level of the sea in Table Bay.

After erecting his observatory, and determining its geographical position, the attention of Sir John Herschel was directed to the preparation of the telescopes with which his observations were to be made. He carried out with him three specula, one of which was made by his father, and used by him in his 20 feet sweeps and other observations; another was made by Sir John, under his father's inspection and instructions; and the other, of the very same metal as the last, was ground and figured by himself. They had all a clear diameter of 18¼ inches of polished surface, and were all equally reflective when freshly polished, and perfectly similar in their performance. The operation of repolishing, which was much more frequently required than in England, was performed by himself with the requisite apparatus, which he had fortunately brought with him from England.

In the use of reflecting specula of considerable weight, it is of the utmost importance that the metal should be supported in its case so as not to suffer any change of figure from its own weight. Sir John found that a speculum was *totally* spoiled by allowing it to rest horizontally on three metallic points at its circumference. The image of every considerable star became *triangular*, throwing out long flaming caustics at the angles. Having on one occasion supported the speculum simply against a flat-board, at an elevation of about 45°, he found that its performance was tolerably good; but on stretching a thin pack-thread vertically down the middle of the board, so as to bring the weight of the metal to rest upon this thread, the images of stars were lengthened horizontally "to a preposterous extent, and all distinct vision utterly destroyed by the division of the mirror into two lobes, each retaining something of its parabolic figure, separated by a vertical band in a state of distortion, and of no figure at all!" The method which Sir John found the best was the following:—Between the mirror and the back of the case he interposed 6 or 8 folds of thick woollen baize, or blanketing, of uniform thickness and texture, stitched together at their edges. The metal, when laid flat on this bed, was shaken so as to be concentric with the rim of the case, and two supports, composed of several strips of similar baize, were introduced so as to occupy about 30° each, and to leave an arc of about 40° unoccupied opposite the point which was to be the lowermost in the tube. When the case is raised into an inclined position, and slightly shaken, the mirror takes its own free bearing on these supports, and preserves its figure. It is essential, however, to the successful application of this method that many thicknesses of the baize or blanket should be employed, "by which only the effect of flexure in the wooden back itself of the case can be eliminated." As the woollen fibres, however, lose their elasticity, the baize should be occasionally taken out, and beaten or shaken up.*

In conducting his observations with these fine instruments, Sir John Herschel observed several curious optical effects, arising from peculiar conditions of the atmosphere, incident to the climate of the Cape. In the hot season, from October to March, but particularly during the latter months of that season, "the nights are for the most part superb" at a few miles distance from the mountains; but occasionally during the excessive heat and dryness of the sandy plains, the "optical tranquillity of the air" is greatly disturbed. In some cases the images of the stars are violently dilated into nebular balls or puffs of upwards of 15′ in diameter. At the end of March, 1834, for example, when Saturn and γ Virginis were both in the

* When Sir John adopted this very simple plan, he was ignorant of the very ingenious method by which Lord Rosse affords an equable support to a large speculum, and which we have already described in this journal, vol. ii., p. 207.

field of the 20 feet reflector, "it could not have been told which was the planet and which the star." On other occasions, the stars form "soft, quiet, round pellets of 3′ or 4′ diameter," resembling planetary nebulæ, and quite unlike the spurious discs which they present when not defined. In other cases, these pellets are seen to arise from "an infinitely rapid vibratory movement of the central point in all possible directions," the luminous discs presenting singular phenomena when thrown out of focus, by pushing the eye-piece further in or pulling it further out than its principal focus.*

In the cooler months, from May to October, and especially in June and July, the state of the air is habitually good, and after heavy rains have ceased for a day or two, the tranquillity of the image and the sharpness of vision, is such that hardly any limit is set to magnifying power, but that which arises from the aberration of the specula. On occasions like these, optical phenomena of extraordinary splendor are produced by viewing a bright star through diaphragms of card-board or zinc, pierced in regular patterns of circular holes by machinery. These phenomena, arising from the interferences of the intromitted rays, and produced less perfectly in a moderate state of the air, surprise and delight every person that sees them. A result of a more valuable kind is obtained when the aperture of the telescope has the form of an equilateral triangle, the centre of which coincides with the centre of the speculum. When close double stars are viewed with the telescope, having a diaphragm of this form, the discs of the two stars, which are exact circles, are reduced to about a third of their size, and have a clearness and perfection almost incredible. These discs, however, are accompanied with six luminous radiations, running from them at angles of 60°, forming perfectly straight, delicate, brilliant lines, like brightly illuminated threads, running far out beyond the field of view, and, what is singular, capable of being followed like real appendages to the star long after the star itself has left the field.

Another optical phenomenon, arising from a peculiar condition of the atmosphere, is described by Sir John Herschel as a "nebulous haze." The effect of it is to encircle every star, of the 9th magnitude and upwards, with a faint sphere of light of an extent proportioned to the brightness of the star. This phenomenon presents itself very suddenly in a perfectly clear sky, free from the slightest suspicion of cloud, and disappears as suddenly, lasting sometimes only for one or two minutes. Sir John Herschel states that similar nebular affections occur in our English climate, but with much less frequency and suddenness in their appearance and disappearance. He at first suspected that the phenomenon arose from dew upon the eye-piece, but repeated examination satisfied him that its origin was really atmospheric.

* Sir John supposes that these phenomena may be produced by ascending and descending currents of hot and cold air rotating spirally.

In studying the polarization of the atmosphere, the writer of this article has had occasion frequently to observe what appears to be the result of the same cause. When the sky was of a fine blue color, and free from clouds, and the degree of polarization, as indicated by the polarimeter,* very great, a sudden change frequently took place without any apparent cause; sometimes near the horizon and not at considerable altitudes, and sometimes at considerable altitudes and not near the horizon. On some occasions the effect was limited in its extent, and of a temporary kind. When it was not temporary, it showed itself in a diminution of the blue tint of the sky, which is invariably accompanied with a diminished polarization, and the whiteness of the sky often increased till clouds were produced, terminating in rain. The cause of these phenomena was doubtless a sudden secretion of aqueous vapor, sometimes of local and of limited extent, and quickly reäbsorbed; and at other times general, and terminating in a change of weather. When a cloud passed over a track of perfectly blue sky, without occasioning any perceptible diminution of tint, the polarization of the part of the sky over which it passed was always diminished, owing, no doubt, to its having left in its path a quantity of aqueous vapor.

The description of phenomena, and the tabulated observations contained in the interesting volume now before us, occupy seven chapters, extending over 450 closely printed pages, and are illustrated with seventeen beautifully executed plates, some of which are of a very great size. The valuable contents of these different chapters would doubtless have appeared in a series of unconnected memoirs in the transactions of the Royal or Astronomical Societies, and with illustrations very inferior, both in number and quality, had it not been for the munificence of his grace the late Duke of Northumberland, who destined a large sum for their publication as a single and separate work. This very amiable and public-spirited nobleman, to whom the observatory of Cambridge owes the gift of the splendid Northumberland achromatic telescope, through which the new planet Neptune was first seen, did not live to witness the final fulfilment of his noble and generous design; but the present duke, the worthy heir of the titles and the fortune of that distinguished nobleman, carried out, in the fullest manner, the liberal intentions of his lamented brother, and thus added another claim to those which, as Lord Prudhoe, he had already earned, upon the gratitude and esteem of the literary and scientific world.

The following are the subjects which are treated in the volume under our notice:—

Chap. I. On the nebulæ and clusters of stars in the southern hemisphere.

* For an account of the polarization of the atmosphere, the reader is referred to Johnston and Berghaus' *Physical Atlas*, part vii., and *London and Edinburgh Philosophical Magazine*, December, 1847. Vol. xxxi., pp. 441–455.

II. On the double stars of the southern hemisphere.

III. Of astronomy, or the numerical expression of the apparent magnitude of stars.

IV. Of the distribution of stars, and of the constitution of the galaxy, or Milky Way, in the southern hemisphere.

V. Observations of Halley's Comet, with remarks on its physical condition, and that of comets in general.

VI. Observations on the Satellites of Saturn.

VII. Observations on the Solar spots.

In the first chapter, on nebulæ and clusters of stars, occupying 164 pages, our author proceeds, after some introductory and explanatory remarks, to give detailed descriptions and monographs of some of the more remarkable of the nebulæ. As some of these nebulæ are visible in Europe, and are all objects of singular interest, we shall lay before our readers a very brief notice of the most important of them.

No.	Right Ascension.			North Polar Distance.			No. of stars laid down in the drawing.
1	18h	11′		106°	15′		44
2	17	52		113	1		27
3	5	27		94	57		26
4	5	40		159	11		105
5	17	53	27″	114	21	16″	186
6	12	43	36	149	25	41	110
7	0	16	24	163	1	58	

No. 1. This remarkable nebula, which is a nebular line, with the figure of a horse-shoe at each end of it, has been observed and drawn by Mr. Mason, an American astronomer, and Mr. Lamont, a native of Scotland, who has the charge of the observatory at Munich. Mr. Mason, whose premature death is deeply to be regretted, used a reflecting telescope of 12 inches aperture, and 14 feet focal length, constructed by himself. The fainter horse-shoe was seen neither by Mr. Mason nor Mr. Lamont.

No. 2. This nebula has also been figured by Mr. Mason, and in this as well as in No. 1, his representation differs from that of Sir John Herschel.

No. 4 is, in the author's opinion, one of the most singular and extraordinary objects which the heavens present. It is situated in the greater nubecula of the Magellanic clouds.

No. 6. This cluster of stars, improperly set down as nebular by Lacaille, is, according to our author, "an extremely brilliant and beautiful object, when viewed through an instrument of sufficient aperture to show distinctly the very different colors of its constituent stars, which give it the effect of a *superb piece of fancy* jewelry." Three of the stars are *greenish white*, two green, one *blue green*, one *red*, and another *ruddy*.

No. 7, (47 Toucani,) is a most magnificent globular cluster. The stars are immensely numerous and compressed. It is compared to a blaze of light at the centre, the stars seeming to run together. Sir John Herschel has observed the extraordinary fact that the inner or compressed part of the cluster is rose-colored, (at another time ruddy or orange yellow,) forming a fine contrast with the white light of the exterior portion. There is a beautiful double star on the south preceding edge of the last portion, but it is probably unconnected with the cluster.

Under the favorable circumstances in which he was placed, our author eagerly availed himself of the opportunity of studying the grand nebula in the sword-handle of Orion, which passed the meridian of the Cape at an altitude of 60°. He had himself delineated this remarkable nebula in 1824: *Four* representations of it, differing essentially from his, had been subsequently published; and it therefore became an object of the deepest interest to discover the causes of these discrepancies, and to ascertain whether or not a change had taken place either in the form or luminosity of the whole nebula, or of any of its parts. Dr. Lamont of Munich, had, in 1837, published "rather a coarsely executed figure" of this nebula, but Sir John Herschel acknowledges that it "contains some valuable particulars respecting the apparent breaking up of the nebula into patches and knots," which had been very unsatisfactorily expressed in his figure of 1824, but "in which his observations of 1834 and 1837, fully confirm Dr. Lamont's remarks." The other drawings, by Sig. Devico, and Sig. Rondoni, published in 1839, 1840 and 1841, are too inaccurate to furnish any materials for speculation.

The splendid drawing of this nebula, which occupies a foot square, and forms the eighth plate of the present work, is one of the noblest specimens of astronomical research which is to be found in the history of the science. We view it at first with mute admiration of the skill and patience of the observer, and even forget for a while the mysterious assemblage of suns and of systems which it sets before us. No fewer than 150 stars are accurately laid down in this remarkable map, and our failing vision can scarcely descry the faint luminosity with which it shades away into the dark sky that encloses it. Neither in its general outline, nor in that of its individual portions, has it the least resemblance to any form natural or artificial. The luminous portions have no relation either in shape or intensity to the stars which bespangle it, and the stars themselves, whether we consider their magnitude or their distances, seem to have no bond of union, and no symmetry of place. Knowing, as we now do, that Lord Rosse's telescope has resolved the nebulous portion into stars, we can no longer satisfy ourselves with the speculation that the nebula is a collection of minutely subdivided matter, accidentally irregular in its outline and density, which may some time or other be combined into stars and planets, but we view it as a mighty galaxy of systems already formed, of suns radiant with light and heat, of worlds in harmonious revolution, teeming with organic life, and rich with the bounties of their beneficent Creator. But even with these views the mind does not rest satisfied. It seeks to know how these systems are combined in the irregular

nebulosity. We see it only in one direction out of an infinite number. May there not be some particular direction, in which it would appear a symmetrical formation, or if it is not a single whole, but a combination of separate formations, may there not be some direction in space along which its separate component parts would assume regular or symmetrical forms?

The variations of figure which this nebula presents in the delineations of it by different astronomers might lead a careless speculator to the opinion that it has either undergone, or is undergoing, great and rapid changes. Sir John Herschel does not participate in such an opinion—

"Comparing," says he, "only my own drawings, made at epochs (1824 and 1837) differing by 13 years, the disagreements, though confessedly great, are not more so than I am disposed to attribute to inexperience in such delineations (which are really difficult) at an early period—to the far greater care, pains, and time, bestowed upon the later drawings, and, above all, to the advantage of local situation, and the very great superiority in respect both of light and defining power in the telescope at the latter, over what it possessed at the former epoch, the reasons of which I have already mentioned. These circumstances render it impossible to bring the figures into comparison, except in points which could not be influenced by such causes. *Now there is only one such particular on which I am at all inclined to insist as evidence of change*, viz., in respect of the situation and form of the 'nebula oblongata,' which my figure of 1824 represents as a tolerably regular oval, &c. &c. Comparing this with its present appearance as exhibited in Plate VIII., *it seems hardly possible to avoid the conclusion of some sensible alteration having* taken place. No observer now, I think, looking ever so cursorily at this point of detail, would represent the broken, curved, and unsymmetrical nebula in question as it is represented in the earlier of the two figures; and to suppose it *seen* as in 1837, and yet *drawn* in 1824, would argue more negligence than I can believe myself fairly chargeable with."—pp. 31, 32.

Passing over another evidence of change, on which Sir John thinks, that "considerable stress might be laid," we have no hesitation in avowing, without regarding our author as in any way chargeable with negligence, that we cannot concur with him in thinking that the discrepancies in question afford any proof whatever of a change in the nebula. Such an extensive change as that to which he refers has no parallel in any of the sidereal phenomena, and would be equivalent to the creation and extinction of whole clusters of worlds and systems, within the brief interval of *thirteen* years! Had the apparent evidences of change been even more distinct and numerous, we should have exhausted every possible mode of accounting for these appearances, rather than have allowed ourselves to consider them as real. In comparing the nebular delineations of Lord Rosse, with those made with smaller instruments by Sir John Herschel, we never attribute the discrepancies to real changes in the nebulæ. In like manner we ought to ascribe the discrepancies between Sir John Herschel's delineations of 1824 and 1837, to the circumstance that the first was made in a bad climate, and the second in a good one, and to regard a difference in the purity and homogeneity of the atmosphere, as equivalent to a difference in the size and power of the telescope. The drawing of 1837,* may therefore be regarded as made with a telescope of much greater size than that with which the drawing of 1824 was made. A change in the health, and in the optical condition of the observer's eye may account for apparent changes in forms that are slightly luminous. Sir John Herschel's eye may in 1824 have begun to experience that remarkable change, to which this organ is subject between twenty-five and fifty years of age, and it may have not only recovered its original vigor, but acquired new power, when he used it at the Cape. The material differences which our author has signalized between the delineations of Dr. Lamont† in 1837, and his own in the same year, arising, we are persuaded, more from difference of climate, and from difference of vision, than from differences between the telescopes employed, may be considered as favorable to our views.

The next remarkable object of which Sir John Herschel gives a minute drawing, and a detailed description, is η Argus, and the great nebula surrounding it. It is situated in R. Ascension, 10^h 38′ 28″, and in 148° 47′ of north polar distance. Our author's drawing of it (17 inches by 12) has the same merit as that of the nebula in Orion, and the nebula the same unmeaning and unintelligible aspect. This nebula is regarded by Sir John as of all sidereal objects that which unites most points of interest. "Its situation is very remarkable in the midst of one of those rich and brilliant masses, a succession of which curiously contrasted with *dark* adjacent spaces, (called by the old navagators *coal-sacks*,) constitute the Milky Way in that portion of its course which lies between the Centaur and the main body of Virgo." In this part of the galaxy there is an average of 3138 stars in a square degree, and in the denser part 5093 in the same area. The bright star η Argus, stands in the midst of this vast stratum of stars, and is remarkable for the singular change which its lustre has undergone since 1677. It was then a star of the *fourth* magnitude. In our recent catalogues it is a star of the *second* magnitude. In 1834 Sir John Herschel found it brighter than a star of the *second* magnitude. In November, 1837, its magnitude was unchanged, but in December of that year he was astonished by its sudden increase of brightness, which exceeded even that of *Rigel*. In March, 1843, the Rev. W. S. Mackay of the Free Church Mission, Calcutta, observed a very remarkable increase in its lustre; it had become a star of the *first* magnitude, as bright as *Canopus*, and in color and size very much like *Arcturus*. In 1844 Mr. Maclear found it almost equal to *Sirius*. In 1845

* This figure is engraved in the memoirs of the Astronomical Society, vol. ii.

† Published with his Thesis, "Ueber die Nebelflecken." Munich, 1837.

it had again begun to decline in lustre. The following is a list of these changes.

Years.	Mag.	Years.	Mag.	Years.	Mag.
1677	4	1827 Feb. 1	1	1838	1
1751	2	1828 Feb. 29	2·1	1842	1
1811-1815	4	1829-1833	2	1843	1
1822	2	1832-1833	2	1844	1
1822-1826	2	1834-1837	1·2	1845	1

After giving this summary of the magnitudes of η Argus, Sir John Herschel remarks that—

"A strange field of speculation is opened by this phenomenon. The temporary stars heretofore recorded have all become totally extinct. Variable stars, so far as they have been carefully attended to, have exhibited periodical alternations, in some degree at least regular, of splendor and comparative obscurity. But here we have a star fitfully variable to an astonishing extent, and whose fluctuations are spread over centuries, apparently with no settled period, and with no regularity of progression. What origin can we ascribe to these flashes and relapses? What conclusions are we to draw, as to the comfort and habitability of a system depending for its supply of light and heat on so uncertain a source?" —p. 36.

As this nebula does not exhibit the slightest appearance of being resolvable into stars, it has therefore nothing in common with the Milky Way, on the ground of which it is projected, and may therefore, as our author supposes, be placed at an immeasurable distance behind that stratum. The accurate representation of this nebula, which includes no fewer than 1216 stars, and is represented in Plate IX. of the work before us, was a work of great difficulty and labor. It occupied several months, during which our author often despaired of being able to transfer to paper its endless details. No description is capable of conveying the least idea of its character, and we must therefore refer our readers to the engraved representation of it.

The magnificent catalogue of nebulæ and clusters of stars in the southern hemisphere comprehends 4015 of these objects, occupying about 80 closely printed pages. The whole of these observations, as well as the entire work of reducing, arranging, and preparing this and all the other catalogues, were executed by Sir John himself, and have more resemblance to the labor of a long life than to the work of a few years. Each of these objects is minutely described by means of single letters or abbreviations, as in the following example:—No. 4015, not v F; L; l E; g lb M; 60; which means *not very faint; large; a little extended; gradually a little brighter in the middle; diameter* 60″; so that if the descriptions had been printed in the ordinary manner, this catalogue would have filled a whole volume of the Philosophical Transactions.

In order to ascertain the law of distribution of these nebulæ and clusters over the surface of the heavens in both hemispheres, Sir John adopted a projection which represented equal areas on the sphere by equal areas on the projection;* and having constructed, on this principle, charts of the northern and southern hemispheres, divided into zones of 3° in breadth, or polar distance, and into hours of rigid ascension, he laid down the nebulæ in each, so as to obtain a *coup d'œil* of their distribution over the whole heavens. In this way, he was led to the following conclusions:—

"1st. The distribution of the nebulæ is not like that of the Milky Way, in a zone or band encircling the heavens. * * *

"2dly. One third of the whole nebulous contents of the heavens are congregated in a broad irregular patch, occupying about *one eighth* of the whole surface of the sphere, chiefly situated in the northern hemisphere, and occupying the constellations *Leo*, *Leo Minor*, the body, tail and hind legs of *Ursa Major*, the nose of the *Camelopard*, the point of the tail of *Draco*, *Canes Venatici*, *Coma*, the preceding leg of *Bootes*, and the head, wings, and shoulder of *Virgo*. This, for distinction, I shall call the *nebulous region of Virgo*.

"3dly. Within this area there are several local centres of accumulation, where the nebulæ are exceedingly crowded, viz., first, from 59° to 62° of north polar distance in the 13th hour of right ascension between the northern part of *Coma* and the fore-legs of *Chara*, as also (in the same hour) from 72° to 78° N. P. D., between the palm branch and the northern wing of Virgo, and again in the same hour from 80° to 87° N. P. D., in the northern wing and breast of Virgo. * * *

"The general conclusion which may be drawn from this survey is, *that the nebulous system is distinct from the sidereal, though involving, and perhaps to a certain extent mixing with the latter.* The great nebulous constellation in the northern hemisphere, which I have called the region of Virgo, being regarded as the main body of this system, and subtending at our point of view an angle of 80° or 90°, it is evident that, supposing its form to approach to the spherical, our distance from its centre must be considerably less than its own diameter, so that our system may very well be regarded as placed somewhat beyond the borders of its denser portion, yet involved among its outlying members."—pp. 135–6.

In treating of the classification of nebulæ, our author divides them into *regular* and *irregular*. The *regular* nebulæ are distinguished by terms expressing their magnitude, brightness, roundness, condensation, and resolvability; and the *irregular* nebulæ are subdivided into subregular, compact, branching, convoluted, cellular, fissured, and cometic. The third class of these objects, named *irregular clusters*, are those which cannot be referred to the class of globular clusters, and are subdivided into three classes—1st, rich, brilliant, and conspicuous clusters; 2d, poor and inconsiderable clusters; and 3d, those which cannot be included in either of these divisions.

Before concluding the subject of nebulæ and clusters of stars, Sir John Herschel treats of the Magellanic clouds, and gives fine eye-sketches of the two nubeculæ which compose them, drawn

* "To execute this projection, we have only to take out upon any scale you please the successive values of Sin. 30′, Sin. 1°, Sin. 1° 30′, and so on to Sin. 5°, from a table of natural sines, and these will be the radii of circles, corresponding in our projection to the successive polar distances, 1°, 2°, 3°, * * * * 90°."

"*entirely without telescopic aid*, when seated at a table in the open air, in the absence of the moon, and with no more light than was absolutely necessary for executing a drawing at all." Sir John was driven to this mode of delineating these interesting *nubeculæ* in consequence of all his own attempts to represent other than very small portions of the *Nubeculæ Major* in the telescope, having been completely baffled by the overwhelming perplexity of its details. Representations of these two nubeculæ, stated to be engraven from very correct drawings, have been published by Mr. Dunlop in the Philosophical Transactions for 1828, but they have little or no resemblance to the delineations of Sir John Herschel.*

The *Nubecula Minor* lies between the parallels of 162° and 165° of north polar distance, and between the meridians of $0^h\ 28^m$ and $1^h\ 15^m$ right ascension. It is of a generally round form to the eye, and its centre of brightness coincides with its centre of figure. The magnificent globular cluster, 47 Toucani of Bode, precedes it by a few minutes of right ascension, but has no connection with it, and, as our author states, "with this exception, its situation is in one of the most barren regions of the heavens. The access to the nubecula minor on all sides is through a desert. Neither with the naked eye, nor with a telescope, is any connection to be traced either with the greater nubecula or with the Milky Way. Within its area there are 37 objects entitled to entry in the catalogue as nebulæ or clusters, and, altogether, 244 stars, nebulæ, and clusters, the positions of which have been determined as preparatory to the construction of a chart of the nubecula and the future execution of a drawing of it.

The *Nubecula Major* is situated between the parallels of 156° and 162° N. P. D., and between the meridians of $4^h\ 40^m$ and $6^h\ 0^m$ of R. Ascension. It consists, like the Minor, "partly of large tracts and ill-defined patches of irresolvable nebula, and of nebulosity in every stage of resolution, up to perfectly resolved stars, like the Milky Way, as also of regular and irregular nebulæ, properly so called, and globular clusters in every stage of resolvability, and clustering groups." It contains no fewer than 278 of these objects, and altogether 919 stars, nebulæ, and clusters. Our author is of opinion, that the Magellanic clouds are "systems *sui generis*, which have no analogues in our hemisphere."

The *Second* chapter of the work before us, *on the Double Stars of the Southern Hemisphere*, is doubtless of equal importance with the first, though the detection and measurement of these stars was regarded by our author as of subordinate interest, and therefore allowed to interfere as little as possible with the discovery of new nebulæ, and the determination of the places of those already known. It would have required at least ten years to have reviewed the southern heavens with the 20 feet reflector, for the purpose of detecting close double stars. Hence, the catalogue of double stars is comparatively deficient in those of the first or closest class, whose distance is *under* two seconds. The numbers in the catalogue are a continuation of those in Sir John Herschel's 6th catalogue, published in the 9th volume of the memoirs of the Astronomical Society. They commence with No. 3347, and terminate with No. 5442, so that the catalogue, occupying 72 pages, contains 2095 double stars. This catalogue is followed by tabulated micrometical measures of double stars, with a synopsis of those measures, a comparison of angles of position of double stars measured with the 7 feet equatorial, and the 20 feet reflector, and with special remarks on the measures of particular double stars in the catalogue. The following is a brief notice of the stars thus specially referred to:—

λ Toucani. R. Asc. $0^h\ 46^m$ N. P. D. 160° 26′. Angle of position in 1835.92, 78° 30, 1837.74, 80° 35, indicating a pretty rapid angular rotation.

h 2036. R. A. $1^h\ 12^m$ N. P. D. 106° 41, angle of position 1830.786, 53°; 1836.958, 38° 05′, giving an angular motion of —2° 422 per annum.

p Eridani R. A. $1^h\ 33^m$ N. P. D. 147° 3′. Angle of position 1834.8, 120° 27′. 1836.723, 119° 30′, indicating a considerable orbitual motion.

70. Dunlop. R. A. $8^h\ 24^m$ N. P. D. 134° 10′. Angle of position 1826.3, 20° 8′ (Dunlop,) 1836.994, 351° 27′ (Herschel,) indicating a very rapid rotation.

β Hydrae et Crateris. R. A. $11^h\ 44^m$ N. P. D. 122° 58′, angle of position in 1834.47, 338° 3′, 1838.09, 342° 2′, indicating a motion in this fine double star of 1° 077 annually.

α Crucis. R. A. $12^h\ 17^m$ N. P. D. 152° 9′. Distance of the stars 5″ 65. This beautiful double star has excited the notice of all the more recent southern observers. Angle of position, 1826.45, 114° 24′ (Dunlop) 1835.53, 120° 36′, (Herschel,) giving an orbitual motion of—0° 698 annually, or —0° 478, taking Sir John Herschel's observations by themselves.

γ Centauri. R. A. $12^h\ 32^m$ N. P. D. 138° 1′. "The extreme dimness of this remarkably fine but difficult double star—each equal, and each of the fourth magnitude, necessarily renders the angles of position precarious." Angle of position 1835.32, 351° 35′, 1836.38, 357° 21′, giving an angular motion of + 5° 440 annually.

γ Virginis.* R. A. $12^h\ 23^m$ N. P. D. 90° 31′. As the complete establishment of the elliptic motion of this interesting double star is justly deemed by our author one of the great facts of modern astronomy, he has reinvestigated its orbit, by a careful examination of all the recorded meas-

* The only mode of reconciling the delineations of the two astronomers, is to suppose that Mr. Dunlop used a telescope with a small magnifying power, exhibiting details which an eye-sketch could not contain.

* Capt. Smith, in his Cycle of Celestial Objects, pp. 275–283, has given an admirable analysis of all the observations on this star previous to the southern ones of Sir John Herschel, with an orbit calculated from the Bedford observations, which yields a period of about 180 years, differing only 2° 12′ from the new period of Sir J. Herschel. See this Journal, vol. VI., p. 234.

ures. He was so fortunate as to observe, about the end of 1835 and beginning of 1836, the eclipse as it were of the one star by the other, a phenomenon seen also by Capt. Smith at Bedford in January, 1826. Sir John has now abandoned the large elliptical orbit which he obtained, and which seemed to be rendered necessary in order to include the observations of Bradley and Mayer. By rejecting these observations, and using only the angles of position taken by the position-micrometer for the epoch of 1781.89, when it was first measured by Sir W. Herschel, and that of 1845.34, which was taken by Capt. Smith, he obtained the following elements :—

Eccentricity, ...	0.87952
Inclination to the plane of projection,	23° 35′ 40″
Position of ascending Node, . .	5° 33′
Angular distance of Perihelion from Node, on the plane of the orbit, or true angle between the lines of Nodes and Apsides, . . .	313° 45′
Epoch of Perihelion passage,	A. D. 1836.43
Periodic time, ...	182°12 years.

Since this orbit was computed, Sir John Herschel has received from Mr. Maedler of Dorpat, the following measures of the angle of position of γ Virginis, beside which we have placed the almost contemporaneous observations of English observers, in order to show the degree of accuracy which has now been attained in measuring the angle of position of two stars very near each other ;—

A. D. 1841 .	355, Angles of position,	200° 6′
" .	34, Dawes	200° 3′
1842 .	361, according to	196° 11′
" .	34, Airy	197° 25′
1843 .	349, Maedler,	192° 9′
" .	33, Smith	191° 36′
1844 .	356,	188° 55′
1845 .	367,	186° 57′
" .	34,	185° 24′

α Centauri, R. A. 13^h 42^m. N. P. D. 122° 9′. "This superb double star," says Sir J. Herschel, "beyond all comparison the most striking object of the kind in the heavens, and to which the discovery of its parallax, by the late Professor Henderson, has given a degree of astronomical importance no less conspicuous, consists of two individuals, both of a high *ruddy* or *orange* color, though that of the smaller is of a somewhat more sombre cast. They constitute together a star which, to the naked eye, is equal or somewhat superior to *Arcturus* in lustre." The distance between the two stars has varied from 22″.45, as observed by Sir Thomas Brisbane in 1824, to 16″.12, as observed by Sir J. Herschel in 1837-.44. Sir John is of opinion that the distance is decreasing at the rate of a little more than *half a second* annually, which, if continued, will bring on an occultation, or exceedingly close appulse, about the year 1867. The plane of the orbit passes nearly through our system. "Taking the coëfficient of parallax of *α Centauri*," says our author, (not *α Centauri*, as misprinted in Mr. Henderson's paper,) "as determined by Professor Henderson at *one second*, it will follow from what has been said, that the real diameter of the relative orbit of one star about the other, cannot be so small as that of the orbit of Saturn about the sun, and exceeds, in all probability, that of the orbit of Uranus." It must therefore be an object of the highest interest with astronomers, to obtain a succession of the most accurate measures of the distance of the two stars.*

The importance of *Astrometry*, or the method of obtaining an accurate numerical expression of the apparent magnitude of the stars, has been universally admitted by astronomers, for it is chiefly by a comparison of these magnitudes at different epochs, that we can become acquainted with changes that have taken place upon their surface, or ascertain the periods of their variation. Our limits will not permit us to describe the ingenious and admirable methods by which our author has endeavored to determine the comparative intensities of the light of the stars ; but we shall give the results in the following table, which contains the photometric determination of the comparative intensities of the light of 69 stars, *α* Centauri being taken as the standard, and made 1.000 :—

Sirius	4.052	λ Argus	0.131
Canopus	1.994	ζ Orionis	0.123
α Centauri	1.000	β Ceti	0.122
Arcturus	0.726	κ Orionis	0.120
Rigel	0.654	σ Sagittari	0.116
Procyon	0.520	γ Centauri	0.107
α Orionis	0.484	ε Centauri	0.105
Lyra	0.446	δ Orionis	0.104
α Eridani	0.441	ε Scorpii	0.103
Antares	0.404	ι Argus	0.103
β Centauri	0.399	α Lupi	0.102
α Crucis	0.377	α Phœnicis	0.101
α Aquilæ	0.350	ζ Argus	0.101
Spica	0.309	α Leporis	0.100
η Argus	0.262	δ Scorpii	0.098
Fomalhaut	0.262	η Canis	0.093
β Crucis	0.255	γ Aquilæ	0.092
γ Orionis	0.207	δ Capricorni	0.088
ε Canis	0.198	μ Argus	0.087
γ Crucis	0.195	ζ Centauri	0.085
λ Scorpii	0.192	α Muscæ	0.084
α Trianguli	0.179	κ Argus	0.075
γ Argus	0.174	γ Cervi	0.074
α Gruis	0.169	π Argus	0.074
θ Scorpii	0.159	β Cervi	0.073
β Argus	0.158	ι Orionis	0.073
ε Argus	0 152	γ Virginis	0.070
δ Canis	0.152	γ Trianguli	0.067
ε Orionis	0.146	β Trianguli	0.064
θ Centauri	0.142	δ Crucis	0.062
ε Saggitarii	0.141	δ Cervi	0.060
α Pavonis	0.140	ο 2 Canis	0.056
β Gruis	0.138	α Circini	0.052
β Canis	0.134	ν Argus	0.045
δ Argus	0.132		

In comparing the photometric results with the conventional scale of naked eye magnitudes, Sir John Herschel has found that if these conventional values be increased by the constant fraction 0.4142

* In concluding this notice of the southern double stars, we may mention that Mr. Mitchel, of the observatory at Cincinnati in the United States, has discovered that the fine star *Antares* is double. This important observation was made by means of an achromatic telescope, mounted parallactically, and executed at Munich by MM. Merz and Mahler. Its aperture is nearly *twelve* inches English.—Struve, *Etudes Stellaires*, note 64, p. 48.

(or $\sqrt{2}-1$,) *the new scale of magnitudes so arising will represent the distances of the respective stars, to which they are ascribed, from our system, on the supposition of an intrinsic equality in the light of the stars themselves;* that is, so that differences of brightness shall be merely apparent, and supposed to arise solely from differences of distance. Were this scale substituted for the present arbitrary one, "α Centauri," says our author, "would be our normal star of the *first* magnitude, β *Crucis* of the *second*, $\varkappa$ *Orionis* of the *third*, ν *Hydræ* of the *fourth*, and δ *Volantis* of the *fifth;* and these are the magnitudes which actually stand annexed to those stars in our catalogues respectively. The effect of such a change would be to place the nomenclature of magnitudes on a natural, or, all events, on a photometric basis, easily remembered—the relation between the Magnitude and the Light of any star being given by the simple equation, $M^2 L = 1$, α Centauri being taken as the unit both of light and magnitude."

In our author's *Fourth* chapter, *On the distribution of stars, and on the constitution of the Galaxy in the Southern Hemisphere*, he treats—first, of the statistical distribution of stars; secondly, of the general appearance and telescopic constitution of the Milky Way;* and, thirdly, on some indications of very remote telescopic branches of the Milky Way, or of an independent sidereal system or systems bearing a resemblance to such branches. The indications referred to under the third of these heads, are deduced from a phenomenon of a very interesting kind, which Sir J. Herschel seems to have been the first to notice. It "consists in an exceedingly delicate and uniform dotting or stippling of the field of view by points of light too small to admit of any one being steadily and fixedly viewed, and too numerous for counting, were it possible so to view them." Our author was always satisfied of the reality of this phenomenon at the moment of observation, though the conviction was not permanent, the idea of an illusion arising from physiological causes having subsequently arisen. Sir John has, however, given the right ascension and north polar distance of 37 points of the heavens where this *whiteness*, or "*stippling of the ground of the sky*" was seen or suspected. In like manner, he has given the places of the points where the ground of the sky is perfectly dark or black, and "certainly devoid of any such stippling or nebulous phenomenon."

On the 25th of October, 1837, Sir John was fortunate enough to obtain a view of the anxiously expected comet of Dr. Halley, and in his fifth chapter, occupying 21 pages, and constituting, in our opinion, one of the most interesting portions of his work, he has given his observations on this singular member of the solar system, illustrating them with thirteen beautiful drawings of it, and adding some curious speculations on its physical condition, and on that of comets in general. On the 29th October, its appearance was the most singular, and such as he had never observed in any previous comet. Its nucleus small, bright, and highly condensed, was shielded or capped on the side next the sun by a vivid but narrow crescent of nebulous light, the front of which presented an outline nearly circular, with an amplitude of about 90° from horn to horn. Within this was situated the nucleus, but at a distance behind the front or vertex of the crescent, considerably less than its *versed sine*.* On the 1st of November it had the common appearance of a comet, with its nucleus and slightly diverging tail; but on the 26th January, after its return from the sun, it had assumed a most surprising and totally new appearance. Its head was sharply terminated, like a ground glass-lamp shade; and within this head was seen "a vividly luminous nucleus," like "a miniature comet, having a nucleus head and tail of its own, perfectly distinct, and considerably exceeding in intensity of light the nebulous head." As the comet rose higher, a minute bright point, never greater than 4″, and like a small star, was distinctly perceived, and this point Sir John calls the nucleus. On the 25th January, the following measures were taken:—

Diameter of the comet's head in R. Ascension,	229″.4	13ʰ 38ᵐ
Distance of the nucleus from the vertex,	118″.3	
Diameter of the head in Declination,	237″.3	14ʰ 15ᵐ

Upon repeating these observations in the "strong morning twilight," the results were—

Diameter of the head in R. Ascension,	196″.7	16ʰ 25ᵐ
Diameter of the head in Declination,	252″	16ʰ 29ᵐ

The deficiency in this second measure of the head obviously arose from the effect of twilight; but we can only account for the increase in declination by concluding "*that the change was real, and that the comet was actually increasing in dimensions with such rapidity that it might almost be said to be seen to grow!*" M. Valz had pointed out the increase in the dimensions of comets as they receded from the sun, but an increase in the ratio of 5 to 6, and in so short an interval, must be regarded as a different phenomenon. On the 26th, the nucleus appeared as a star of the 10th magnitude, furred and nebulous; and the dimensions of the comet had greatly increased, the diameter in right ascension being 309″, and in declination 329″, so that the total bulk of the comet, exclusive of the coma, had greatly more than doubled in 24 hours. On the 28th January, upon looking through the 20 feet reflector, Sir John exclaims—"Most astonishing! The coma is all but gone, but there are long irregular nebulous tails in various directions." "The nucleus

* Our author has represented in his *thirteenth* plate the course and aspect of the Southern Milky Way, from Antinous to Monoceres, delineated with the naked eye by faint lamp-light in the open air.

* This is no doubt Mr. Cooper's *Fan*, and M. Arago's "*Sector*." The tail was obliterated by the twilight, and subsequently appeared.

is now no longer a dim misty speck, but a sharp brilliant point. I cannot, however, raise a well-defined disc on it." "It is like a planetary nebula, a little hazy at the edges, 2″ or 2½″, in diameter." "I now see a sharp, all but planetary disc, diameter fully 1½″, quite distinct from the haze about it. It is like one of Jupiter's satellites in a thick fog of hazy light." "I can hardly doubt," Sir John adds, "that the comet was fairly evaporated in perihelio by the sun's heat, and resolved into transparent vapor, and is now in process of rapid condensation and re-precipitation on the nucleus." The comet resumed its former size on the 29th, and afterwards gradually disappeared as it receded from the sun. Sir John notices the following points as especially remarkable :—

1st. The astonishingly rapid dilatation of its visible dimensions.

2d. The preservation of the same geometrical form of the dilated and dilating envelope.

3d. The rapid disappearance of the coma; and,

4th. The increase in the density and relative brightness of the nucleus.

Our limits will not permit us to discuss the speculative views which these phenomena have suggested to our author. He rejects the hypothesis of Valz, that the volume of the comet is directly proportional to its distance from the sun. He maintains that the laws of gravitation are insufficient to account for such a form of equilibrium as that of the comet, which was paraboloidal, and that such a form, as one of equilibrium, is inconceivable without the admission of repulsive as well as of attractive forces. "But if we admit," he adds, "the matter of the tail to be at once repelled from the sun and attracted by the nucleus, it no longer presents any difficulty." In order to obtain the repulsive power, Sir John hazards a theory which supposes the sun to be permanently charged with electricity. The cometic matters vaporized by the sun's heat, *in perihelio*, the two electricities separated by vaporization, the nucleus becoming negative and the tail positive, and the electricity of the sun directing the tail, in the same manner as a positively electrified body would an elongated non-conducting body, having one end positively, and the other negatively excited. The separation of Bielas' comet into two, travelling side by side, like the Siamese twins, presents a new difficulty which it would not be easy to explain. But here we are beyond our depth; and rather than admit electricity as an agent residing in every sun and acting upon every system, we remain content with the humbler supposition that the rays of the sun may, in the exercise of their chemical and physical influences, find some ingredients in the tails of comets, upon which, by their joint action, they may generate forces capable of producing the phenomena which we have been considering. If we once admit magnetism and electricity as agents in our sidereal systems, the mesmerists and phrenologists will form an alliance with the astrologer, and again desecrate with their sorceries those hallowed regions on which the wizard and the conjuror have long ceased to tread.*

The elements and perturbations of the sixth satellite of Saturn having been elaborately investigated by Bessel, and very little being known respecting the rest, Sir John Herschel availed himself of his advantageous position at the Cape, to make a series of observations on these interesting bodies. Our readers are no doubt aware that after the fourth satellite had been discovered by Huygens in 1655, Cassini discovered the fifth in 1671, and the first, second, and third, in 1684. Sir W. Herschel discovered, in 1780, the sixth and seventh nearer the planet than the rest, the seventh being the nearest. As this nomenclature was very unsatisfactory, many astronomers named them by giving numbers corresponding to their distances from the planet; and Sir John Herschel has proposed to distinguish them by a series of heathen names, as in the following table :—

Order from the Planet.	Old Order.	Discoverers.	Sir J. Herschel's Names.
I.	7	W. Herschel, 1780	
II.	6	W. Herschel, 1780	Enceladus.
III.	1	D. Cassini, 1684	Tethys.
IV.	2	D. Cassini, 1684	Dione.
V.	3	D. Cassini, 1684	Rhea.
VI.	4	C. Huygens, 1655	Titan.
VII.	5	D. Cassini, 1671	Iapetus.

Although it would be difficult to banish from our solar system the names of the heathen gods by which the primary planets are distinguished, yet we must enter our protest against the admission of a brood of demigods. The nomenclature in the first column of the preceding table is doubtless the proper one, and the adoption of it can be attended with no more inconvenience than we are accustomed to in analogous matters. If the houses of a street are numbered before it is completed, the numbers must be changed whenever a new house is placed on a vacant area. If it is proper or necessary to give names to the secondary planets, our mythological knowledge must be more extensively put in requisition, for we cannot allow the planet Saturn to have a monopoly of the gods We must find names for the *four* satellites of *Jupiter*, and *Uranus;* and *Neptune* will make a similar and a heavy demand upon Lemprière.

Sir John Herschel concludes his work with a *Seventh* chapter, containing *Observations on the Solar Spots*, and conjectures respecting their cause. The figures of the spots, of which he has given us *thirteen* in a very interesting plate, were delineated

* Our astronomical readers will be gratified to learn that M. Leverrier has found that the periodical comets of 1770 and 1844 are two different bodies; that two of the comets of Faye, Vico, and Lexell, passed close to Jupiter; and that all these comets, now permanently attached to our system, have come into it and been detained by the action of Jupiter and other bodies. M. Leverrier proves that the comets of Faye and Lexell have been in our system for at least a century, and have come a dozen of times near the earth without being observed. The comet of 1844 he proves to be the same as that of 1678, which has travelled into our system from the depths of infinite space, and been fixed among us centuries ago. It will revisit us in 1849.

from magnified images formed on a screen by means of a seven-feet achromatic refractor. One of these spots, seen on the 29th March, 1837, occupied an area of nearly *five square minutes*, equal to 3,780,000,000 square miles. "The black centre of the spot of May 25, 1837, (not the tenth part of the preceding one,) would have allowed the globe of our earth to drop through it, leaving a thousand miles clear of contact on all sides of that tremendous gulf." For such an amount of disturbance on the sun's atmosphere, what reason can be assigned? Sir John Herschel justly observes, that the heating power of the sun is the cause of the great disturbances in our own atmosphere; but as there is no such source of heat to act upon the sun, we must seek for the cause within the sun itself. Now, the spots are clearly connected with the sun's rotation; and it has been long known that they do not appear in the sun's polar regions, but are confined to two zones, extending, according to our author, to about 35 degrees of N. and S. latitude, and separated by an equatorial belt, on which spots are very seldom found. Hence he considers the phenomenon of the spots as due to circulatory movements, to and from the sun's poles, in the fluids which cover its surface, modified by its rotation about its axis; and he tries to find a probable cause for these movements. Having observed a striking deficiency of light in the borders of the sun's visible disc, extending to some distance within it, he justly infers from this deficiency the existence of an atmosphere; and he adduces "the extraordinary phenomenon of the rose-colored solar clouds witnessed during the total eclipse of July 8th, 1842, * * * * as definitively settling this question in the affirmative." Assuming, then, the extent of such an atmosphere "to be considerable—not merely in absolute measure—*but as an aliquot part of the sun's radius*," its form, in virtue of the laws of fluid equilibrium, must be oblately spheroidal, and consequently its equatorial thickness greater than its polar thickness. Hence, the escape of heat must be greater from the polar than from the equatorial zone, and the latter must possess a higher temperature. In this respect, the sun resembles our own earth; and on this supposition our author thus reasons respecting the causes of the spots:—

"The spots in this view of the subject would come to be assimilated to those regions on the earth's surface in which, for the moment, hurricanes and tornadoes prevail—the upper stratum being temporarily carried downwards, displacing by its impetus the two strata of luminous matter beneath, (which may be conceived as forming an habitually tranquil limit between the opposite upper and under currents,) the upper, of course, to a greater extent than the lower—thus wholly or partially denuding the opaque surface of the sun below. Such processes cannot be unaccompanied with vorticose motions, which, left to themselves, die away by degrees, and dissipate; with this peculiarity, that their lower portions come to rest more speedily than their upper, by reason of the greater resistance below, as well as the remoteness from the point of action, which lies in a higher region, so that their centre (as seen in our water-spouts, which are nothing but small tornadoes) appears to retreat upwards. Now, this agrees perfectly with what is observed during the obliteration of the solar spots, which appear as if filled in by the collapse of their sides, the penumbra closing in upon the spot, and disappearing after it."

We have been much disappointed at finding that Sir John Herschel either has not observed or has not described the extraordinary structure of the *fully luminous* disc of the sun, as we and others have repeatedly seen it through Sir James South's great Achromatic;—a structure which should have been more distinctly seen at the Cape than in our climate. This structure of which, if we recollect rightly, we have seen a beautiful drawing made by Mr. Gwilt, resembles compressed curd, or white Almond soap, or a mass of asbestos fibres lying in a *quaquaversus* direction, and compressed into a solid mass. There can be no illusion in this phenomenon:—It is seen by every person with good vision, and on every part of the sun's luminous surface or envelope; and we think affords an ocular demonstration that that surface or envelope is not a *flame*, but a soft solid, or thick fluid maintained in an incandescent state by subjacent heat, and capable of being disturbed by differences of temperature, and broken up as we see it when the sun is covered with spots or openings in the luminous matter.

Such is a brief and very imperfect analysis of a work which exhibits in a high degree the patience and the genius of its author—a work which had he done nothing else would have given immortality to his name. Whether we view it as an independent production, or as the completion of the labors of his distinguished parent, it is a work truly national, to which, however, the nation has contributed nothing. To the liberality and devotion to science of one individual we owe the valuable results which it records, and to the munificence of another its publication in a separate form, and its gratuitous presentation to the universities, the societies, and the principal philosophers in Europe and America. Wealth may well be coveted when we find it thus judiciously employed when in the possession of genius, and thus liberally expended when belonging to rank and station. It is then that "the fruit of wisdom is better than gold, and her revenue than choice silver," and that they "who love wisdom shall inherit substance, and have their treasures filled."

Since the work of Sir John Herschel was drawn up, Astronomy has been making rapid advances in Europe; and as an opportunity may not soon occur of resuming the consideration of the subject, we shall now give a brief notice of some of the most remarkable results which have been obtained, and which have very recently been published by M. Struve of Pulcova, in his *Etudes d'Astronomie Stellaire*. This interesting work, to which we have already had occasion to refer, is, we believe, in the possession only of M. Struve's private friends. It is drawn up as a report, addressed to his ex-

cellency M. Le Comte Ouvaroff, minister of public instruction, and president of the Imperial Academy of Sciences at St. Petersburg, and has the subsidiary title of *Sur la Voie Lactée, et Sur les Distances des Etoiles Fixes.*

After some historical notices of the speculations of Galileo, Kepler, Huygens, Kant, Lambert, and Michel, M. Struve gives a general view of the discoveries of Sir W. Herschel on the construction of the heavens, and of his peculiar views respecting the Milky Way. He compares his opinion on this subject, as maintained in 1785, with that to which he was subsequently led, and arrives at the conclusion, which we have already had occasion to mention, that, according to Sir W. Herschel himself, the visible extent of the Milky Way increases with the penetrating power of the telescopes employed; that it is impossible to discover by his instruments the termination of the Milky Way (as an independent cluster of stars;) and that even his gigantic telescope of forty feet focal length, does not enable him to extend our knowledge of the Milky Way, which is incapable of being sounded.

In his next section, on the "Progress of Stellar Astronomy since the time of Herschel," he gives an account of the labors of M. Argelander, in establishing beyond a doubt the translation of our sun, with its planets in absolute space, and those of his own son, M. O. Struve, in ascertaining the angular velocity of its motion, and in verifying the direction in which it moves, as determined by Argelander. He gives an account of the researches of Bessel, on the proper motions of Sirius and Procyon, from which that distinguished astronomer inferred the existence of large opaque bodies round which these motions are performed, and he mentions, without giving it any countenance, the bold speculation of M. Maedler of Dorpat, that the Pleiades forms the central group of the system of the Milky Way, and that *Alcyone*, the brightest star of the Pleiades, may be regarded as the central sun of the Milky Way, round which all the stars move with the same mean angular velocity, whatever be the inclination of their orbit, and their lineal distance from the central body.

Passing over his notice of the labors of the Russian astronomers, of Sir John Herschel, and Mr. Dunlop, on the subject of nebulæ and double stars, he treats of the structure of the Milky Way, as deduced from the catalogues of Weisse, Argelander, Piazzi, and Bessel. With this view, he inquires into the arrangement of the stars in the equatorial zone or belt, 30° wide, extending to 15° N. and 15° S. of the equator. In the catalogue of Weisse, there are in that belt 31,085 stars, which are divided as follows:—

Bright stars, from 1st to 6th magnitude, .	664
Stars of the 7th magnitude, . . .	2500
Stars of the 8th magnitude, . . .	8183
Stars of the 9th magnitude, . .	19738

But though only these 31,085 stars were observed by Bessel, yet M. Struve has shown, by an ingenious calculation, that there are 52,199 existing in the equatorial zone.

M. Struve had shown in 1827, that if we divide the celestial vault visible in Europe by circles parallel to the equator, the stars are almost uniformly distributed in the zones thus formed, if we include at once all the 24 hours of R. Ascension; but that a very variable condensation takes place in each zone in the successive hours of R. Ascension. This will appear from the following table, showing the number of stars existing in the equatorial belt from the 1st to the 9th magnitude for each hour of R. Ascension:—

Hours of R. Ascension.	Stars from 1st to 9th Magnitude.	Hours of R. Ascension.	Stars from 1st to 9th Magnitude.
I.	1516	XIII.	1533
II.	1609	XIV.	1766
III.	1547	XV.	1896
IV.	2146	XVI.	1661
V.	2742	XVII.	2111
VI.	4422	XVIII.	3229
VII.	3575	XIX.	2751
VIII.	2854	XX.	2566
IX.	1973	XXI.	1752
X.	1631	XXII.	1652
XI.	1797	XXIII.	1811
XII.	1604	0.	2055

Hence, dividing the whole zone into six regions, of four hours each, *two* of these are rich in stars, and *four* poor, the two rich regions being from V. to VIII. and from XVII. to XX.; and hence, M. Struve concludes, from a closer inspection of the table, that there is a gradual condensation of the stars towards a principal line, which is a diameter of the equatorial zone situated between the points $VI^h\ 40^m$ and $XVIII^h\ 40'$ of the disc. The line of least condensation is situated between the points $I^h\ 30'$ and $XIII^h\ 30'$, making an angle of 78° with the line of greatest condensation. If we divide the disc or zone into six circles parallel to the principal diameter, the density in successive bands diminishes on both sides with the distance. The line of greatest condensation does not pass through the sun. The distance of the sun from the principal diameter is about 0 15 *a*,* which is nearly equal to the radius of the sphere which separates the stars of the *first* from those of the *second* magnitude. The line of greatest condensation is not quite a straight line, but presents extraordinary lacunæ, as in Serpentarius, and accumulations, as in Orion. Hence the angle of 78° between the lines of greatest and least density is explained by these anomalies, for it would otherwise have been 90°.

Comparing this description of the state of the stars in the equatorial zone which encircles the sun, with the phenomena of the Milky Way, M. Struve arrives at the conclusion, "that the phenomenon of the condensation of the stars towards a principal line of the equatorial zone is closely connected with the nature of the Milky Way, or rather that this condensation and the aspect of the Milky Way are identical phenomena.

In extending this inquiry to the six million

* The letter *a* denotes the radius of a sphere including all the stars seen by the naked eye.

nearly (5,819,100) of stars visible in the twenty-feet telescope of Sir W. Herschel, M. Struve finds that the greatest and least densities fall very nearly on the same points of the periphery of the disc, as in the case of stars of the 9th magnitude; and he gives the following distribution of these stars in every four hours of R. Ascension:—

				No. of Stars.
From	I^h to	V^h	of R. Ascension,	391,700
"	V "	IX	"	1,984,200
"	IX "	XIII	"	235,400
"	XIII "	XVII	"	387,000
"	XVII "	XXI	"	2,365,100
"	XX "	I	"	455,600
From	0^h to	XXII^h 60′	of R. Ascen.	581,900

We regret that our narrow limits will not permit us to give a full account of M. Struve's latest researches on the Milky Way, in which he determines the law of the condensation of the stars towards a principal plane. After ascertaining that the number of stars in the whole celestial sphere, as seen by Sir W. Herschel's twenty-feet telescope, amount to (20,374,034) upwards of twenty millions, he obtains the following values of the density of the stars, and of the mean distance between two neighboring ones, at different distances from the principal plane of the Milky Way:—

Distance from the principal plane.*	Density in Stars.	Mean distance between two neighboring stars.
0.00	1.00000	1.000
0.05	0.48568	1.272
0.1	0.33288	1.458
0.2	0.23895	1.611
0.3	0.17980	1.779
0.4	0.13021	1.973
0.5	0.08646	2.261
0.6	0.05510	2.628
0.7	0.03079	3.190
0 8	0.01414	4.136
0.8660=Sin. 60.	0.00532	5.729

In order to determine the radii of the spheres containing the first six classes of stars, or those between the first and the sixth magnitude, M. Struve takes as the basis of his calculation the stars in our northern hemisphere, as given by Argelander in his *Uranométrie*. Thus—

Magnitudes,	1	2	3	4	5	6
No. of Stars,	9	34	96	214	550	2342

and from these numbers he obtains the following results, the unity in the second column being the radius of a sphere containing all the stars visible to the naked eye:—

Apparent magnitudes according to Argelander.	Radius of the Sphere.	Progression calculated.
6	1.000	1.000
5	0.6998	0.7071
4	0.5001	0.5003
3	0.3602	0.3536
2	0.2413	0.2500
1	0.1424	0.1768

The agreement between the radii in the second column, and the geometrical progression, with the ratio $\frac{1}{\sqrt{2}}$, in the third, is very remarkable. Extending this law to stars of other magnitudes, and adopting for a new unity the mean distance of stars of the first magnitude, he obtains the following table of the relative distances of all classes of stars, A denoting the magnitudes in Argelander's catalogue, B those in Bessel's zones, and H those seen in the 20-feet telescope:—

Apparent Magnitudes.	Distance of Interior Limit.	Mean Distance.	Distance of Exterior Limit.
1 A	... ...	1.0000	1.2638
2 A	1.2638	1.8031	2.1408
3 A	2.1408	2.7639	3.1961
4 A	3.1961	3.9057	4.4374
5 A	4.4374	5.4545	6.2093
6 A	6.2093	7.7258	8.8726
6 B	... ...	... ...	8.2161
7 B	8.2160	... ...	14.4365
8 B	14.4365	... ...	24.8445
9 B	24.8445	... ...	37.7364
H	... ...	... ...	227.782

That is,

1. The last stars visible to the naked eye, according to Argelander, are at the distance of 8-.8726 times *unity*, or nearly *nine* times the distance of the stars of the first magnitude.

2. The last stars of the ninth magnitude, which Bessel has descried in his zones, are at the distance of 37.73 unities, or nearly *thirty-eight* times the distance of stars of the first magnitude; and,

3. The extreme stars descried by Sir W. Herschel in his sweeps with his 20-feet telescope, are 227.8 unities, or *two hundred and twenty-eight* times the distance of the stars of the first magnitude, or 25.672 times more remote than the stars of the sixth magnitude, or the furthest seen by the naked eye.

M. Struve next directs our attention to a new and very singular speculation, respecting "the extinction of the light of the fixed stars in its passage through celestial space." So long ago as 1823, Dr. Olbers, in a memoir *On the transparency of the celestial spaces*, assumed that in the infinity of space there existed an infinity of created worlds—of suns, each of which, like our own, shone with its own light; and on this supposition, he demonstrated that the whole visible heavens should shine with a lustre equal to that of our own sun. But as such a condition of the firmament does not exist, he infers that there must be such an absorption of this sidereal light as to reduce it to what we now see in the heavens. In producing such an effect, he proves that an absorption of 1-800th part of the light of each star in its passage through a distance equal to that of Sirius from the sun, would be sufficient. In favor of such an hypothesis, no facts have been produced, but M. Struve conceives that a proof of the actual extinction of light may be found in the enumeration of stars of different orders of brightness, and that even the rate of extinction may, within certain limits, be determined.

The penetrating power of Sir W. Herschel's 20-feet telescope, he found to be 61.18, that is, by the help of this instrument, we can see stars 61.18 times more distant, than the last stars, (sixth magnitude,) which can be seen by the naked

* The radius of the sphere containing all the 20 millions of stars above mentioned being unity.

eye. This number 61.18, supposes the opening of the pupil, to be exactly 0.2 of an English inch, but as long-sighted and short-sighted persons have different powers of sight, the force of the eye is not a proper unity, in measuring the force of a telescope. M. Struve therefore substitutes for the eye a small achromatic telescope of 0.211 aperture, and magnifying *three* times, which will introduce into the eye exactly the same quantity of light that passes directly through the pupil when its aperture is 0.2, while it gives a precise image, independent of the character of the eye. With this modulus, representing the eye as unity, he could almost double the number of the stars contained in the maps of Argelander, or to speak more exactly, he counted 183 when only 100 were in the same space in the map. In taking, therefore, for unity the distance of the last stars of the sixth magnitude, (6 A,) which Argelander has seen, the visual radius or penetrating power of the Herschelian modulus will be $\sqrt[3]{1.83} = 1.2231$, or equal to $1.2231 + 8.8726 = 10.582$ times the mean distance of a star of the first magnitude. But Herschel has determined photometrically that this radius is equal to twelve times the distance of stars of the first magnitude, a remarkable coincidence which could scarcely be expected. Hence the range of the telescope of twenty-feet is 61.18, $\sqrt[3]{1.83} = 74.89$ times the distance of the stars 6 A, or $74.83 + 8.876 = 663.96$ times the mean distance of stars of the first magnitude. But instead of 74.83, the gauges of Herschel give us 25.672 for the radius of the stars 6 A. It follows therefore that the range of Herschel's telescope, as determined by astronomical observations, exceeds by scarcely one third the range which corresponds to its optical force. How are we to explain this fact, asks M. Struve? I can see no other explanation, he adds, than that of admitting "that the intensity of light decreases in a greater proportion than the inverse ratio of the squares of the distances, or, what is the same thing, *that there exists a loss of light*, an extinction, in the passage of light through celestial space." In computing the amount of the extinction, M. Struve finds that it is *one* per cent. for stars of the first magnitude, (1 A,) *eight* per cent. for stars of the sixth magnitude, (6 A,) *thirty* per cent. for those of the ninth magnitude, (9 B,) and *eighty-eight* per cent. for the Herschelian stars, H.

These views, which appear to us well founded, have been challenged by an eminent writer in the Edinburgh Review,* who, while he admits the absolute infinity in the number of the stars, maintains that the foundation of the reasoning of Olbers and Struve may be "struck away," by certain "modes of systematic arrangement of the stars in space," which, "it is easy to imagine," these modes being "entirely in consonance with what we see around us of subordinate grouping actually followed out." It would have been desirable that the reviewer had stated *one* of these modes in justification of this bold challenge. We confess ourselves unable to conceive such a mode of arrangement, although we cannot agree either with Olbers or Struve in their conclusion, that the extinction of light, if it does exist, proves that sidereal space is *filled with some fluid such as ether*, which is capable of intercepting a portion of the light which it transmits. To *fill infinite space with matter*, in order to explain a phenomenon, seems to us the very last resource of a sound philosophy. The sun has an atmosphere, widely extended in the apprehension of every astronomer. The planets have atmospheres too: our solar system boasts of about 700 recorded comets; and M. Arago is of opinion that if the perihelia of comets are distributed throughout the system as between the sun and the orbit of Mercury, there would be *three and a half millions of comets* within the sphere of Uranus. Within the sphere of Neptune, of course, there must be many more; and Capt. Smith, in mentioning the opinion of Arago, adds, that there are many considerations which, on the same hypothesis, would greatly increase that number. If we consider, also, the enormous extent of the tails of these bodies, some of them millions of miles long, and the increase in the dimensions of comets as they recede from the sun, we shall have no difficulty in concluding that, within the limits of our own system, there is an immense mass of atmosphere or nebulosity capable of extinguishing a portion of the light which falls upon it. Let us, then, fill the infinite universe with similar systems—with similar obstructions to light, and we shall not require an ethereal medium to account for the want of luminosity in the starry firmament. The reviewer whom we have quoted, not satisfied with an instantaneous demolition of the speculation of Olbers and Struve, again slays the slain. "Light, it is true," he says, "is easily disposed of. Once absorbed, it is extinct forever, and will trouble us no more. But with radiant heat the case is otherwise. This, though absorbed, remains still effective in heating the absorbing medium, which must either increase in temperature, the process continuing, *ad infinitum*, or, in its turn, becoming radiant, give out from every point, at every instant, as much heat as it receives." We do not think that we are in a condition to draw this conclusion. The law of the transmission of *heat* through the celestial spaces is a problem unsolved; and till we can explain how the luminous and chemical rays of the sun reflected from the moon, are transmitted to the earth, while those of heat cannot be exhibited, even when concentrated by the most powerful burning instruments, we are not entitled to urge the objection of the reviewer.

M. Struve concludes his interesting report by giving us an abstract of the unpublished but highly interesting researches of M. C. A. F. Peters, of the central observatory of Pulkova, on the parallaxes and distances of the fixed stars. After a historical notice of the labors of preceding astronomers on the subject, M. Peters determines the actual parallaxes of the stars from observations

* Edinburgh Review, January, 1848. No. 175.

made with the great vertical circle of Ertel. This noble instrument, forty-three inches in diameter, is divided into every two minutes, and by means of four micrometer microscopes, its indications can be read off to the *tenth of a second*. The telescope has an aperture of *six* inches diameter, and a magnifying power of 215. The following are the results which he obtained :—

	Absolute Parallaxes.	Probable Error.
61 Cygni,*	+ 0″.349	0″.080
α Lyræ,†	+ 0 .103	0 .053
Pole Star,‡	+ 0 .067	0 .012
Groombridge, (1830,)	+ 0 .226	0 .141
Capella,	+ 0 .046	0 .200
ι Ursæ Majoris,	+ 0 .133	0 .106
Arcturus,	+ 0 .127	0 .073
α Cygni,	+ 0 .082	0 .043

In attempting to determine the parallax of stars of the first and second magnitude, M. Peters founds his researches on all the parallaxes which have been determined with sufficient precision. He finds that there are *thirty-five* stars, whose parallaxes, whether absolute or relative, are determined with a degree of precision sufficient for his purpose; but he excludes 61 *Cygni* and *Groombridge* 1830, as having a great proper motion. The general result at which he arrives is, "*that the mean parallax of stars of the second magnitude is* + 0″ 116, *and that the probable error of this determination is only* 0″ 014." By combining this value with the table of relative distances in page 527, he obtains the results in the following table given by M. Struve :—

Apparent mags.	Parallaxes.	Distances expressed in radii of the Earth's orbit.	No. of Julian years in which light traverses these distances.
1 A	0.209	986000	15.5
1.5 A§	0.166	1246000	19.6
2 A	0.116	1778000	28.0
2.5 A	0.098	2111000	33.3
3 A	0.076	2725000	43.0
3.5 A	0.065	3151000	49.7
4 A	0.054	3850000	60.7
4.5 A	0.047	4375000	69.0
5 A	0.037	5378000	84.8
5.5 A	0.034	6121000	96.6
6 A	0.027	7616000	120.1
6.5 A	0.024	8746000	137.9
6.5 B	0.025	8100000	127.7
7.5 B	0.014	14230000	224.5
8.5 B	0.008	24490000	386.3
9.5 B	0.006	37200000	586.7
11 + 0.5	0.00092	224500000	3541.0

This table exhibits to us grand truths, which, we may venture to say, neither Newton nor La Place ever contemplated as within the range of human intellect. But even these are surpassed in interest by the determination of the actual velocity with which our own solar system, our sidereal home, is wheeling its ethereal round, guided by some great central body, whose light, if it has any, we may, perhaps, not have seen, and whose position we have not yet determined.

To the solution of this great problem, M. Peters applies the numbers in the preceding table. M. Otto Struve, by combining the results of his calculations with those of M. Argelander, has determined that the point to which our solar system is advancing is situated at the epoch of 1840 in

Right Ascension,	259° 35′.1	with a probable error of	2° 57′.5
And N. Declination,	34 33.6	"	"	"	3 24.5

M. O. Struve has also determined the angular value of the annual motion of the sun as seen at a right angle to its path, and at the mean distance of the stars of the first magnitude.

By Right Ascension of stars,	0″.32122	with a probable error of	0″.03684
By Declination of do.,	0 .35719	"	"	"	0 .03562
Or by combining these,	0 .3392	"	"	"	0 .0252

But as the parallax of stars of the first magnitude is 0″.209, we can change the angular motion of the sun into linear motion in space; and hence, taking the radius of the earth's orbit as unity, we have $\frac{0.3392}{0.209} = 1.623$, with a probable error of 0.229, for the *annual* motion of the sun in space.

"Here, then," says M. F. W. G. Struve, "we have the splendid result of the united studies of MM. Argelander, O. Struve, and Peters, grounded on observations made at the three (Russian) observatories of Dorpat, Abo, and Pulkova, and which is expressed in the following thesis :—'The motion of the solar system in space is directed to a point of the celestial vault situated on the right line which joins the two stars π and μ *Herculis*, at a quarter of the apparent distance of these stars, reckoning from π *Herculis*. The velocity of this motion is such that the sun, with all the bodies which depend upon it, advances annually in the above direction 1.623 times the radius of the earth's orbit, or 33,550,000 geographical miles. The possible error of this last number amounts to 1,733,000 geographical miles, or to a *seventh* of the whole value. We may then wager 400,000 to 1 that the sun has a proper progressive motion, and 1 to 1 that it is comprised between the limits of thirty-eight and twenty-nine millions of geographical miles.'"—p. 108.

That is, taking 95 millions of English miles as the mean radius of the earth's orbit, we have 95 × 1.623 = 154.185 millions of miles, and, consequently,

	English Miles.
The velocity of the Solar System,	154,185,000 in the year.
Do. do.	422,424 in a day.
Do. do.	17,601 in an hour.
Do. do.	293 in a minute.
Do. do.	57 in a second.

The sun and all his planets, primary and secondary, are therefore now in rapid motion round an invisible focus. To that now dark and mysterious centre, from which no ray, however feeble, shines, we may in another age point our telescopes—detecting, perchance, the great luminary which controls our system, and bounds its path—into that vast orbit which man during the whole cycle of his race may never be allowed to round. If the buried relics of primeval life have taught us how brief has been our tenure of this terrestrial paradise compared

* Bessel makes it 0″.348 0″.010.

† M. Struve makes it 0′.261 0″.025.

‡ Taking the mean of five values of it by Lindenau, Struve, and Preuss, do. do., and Peters, we have 0″.091 0″.010. M. Peters makes it 0″.106 as a final determination.

§ The magnitudes 1·5 and 2·5 are stars of intermediate magnitude, between those of the *first* and *second* and the *second* and *third* magnitudes.

with its occupancy by the brutes that perish, the sidereal truths which we have been expounding impress upon us the no less humbling lesson, that from the birth of man to the extinction of his race, the system to which he belongs will have described but an infinitesimal arc of that immeasurable circle in which it is destined to revolve. It is as if the traveller or naturalist, equipped for the survey of nature's beauties and wonders, had been limited only to a Sabbath's journey. Some mountain tops might rise to his view as he creeps along, and some peaks might disappear beyond the horizon which he leaves behind; but had the first man surveyed the constellation Hercules, to which our system is advancing, it would have seemed to him as remote as it will appear to the last of our race.

In the contemplation of the infinite in number and in magnitude, the mind ever fails us. We stand appalled before the mighty spectre of boundless space, and faltering reason sinks under the load of its bursting conceptions. But placed, as we are, on the great locomotive of our system, destined surely to complete at least one round of its ethereal course, and learning that we can make no apparent advance on our sidereal journey, we pant with new ardor for that distant bourn which we constantly approach without the possibility of reaching it. In feeling this disappointment, and patiently bearing it, let us endeavor to realize the great truth from which it flows. It cannot occupy our mind without exalting and improving it. It cannot take its place among our acquirements without hallowing and enobling them. Though now but a truth to be received, it may yet become a principle of action, and though now veiled by a cloud, it may yet be a lamp to our feet and a light to our ways. Whom God made after His own image, he will not retain in perpetual darkness. What man's reason has made known, man will be permitted to see and to understand. "He that bindeth the sweet influences of the Pleiades, and looseth the bands of Orion, and quieteth Arcturus with his sons," will in His own time "discover deep things out of darkness," and "reveal the ordinances of heaven."

The History of Auricular Confession, religiously, morally, and politically considered, among Ancient and Modern Nations. By Count C. P. de Lasteyrie, translated under the author's especial sanction, by Charles Cocks, B. L. Two vols. Bentley.

This is a clever translation of a book which has been generally read, and with curiosity and interest, in Paris. There is more of the show than the reality of learning in it, and the author writes as from a brief; but his intention is presented with considerable power, and, in every imaginable evidence of detestable tendency in the practice of Confession, with relation to religion, morality, or history, the subject may be said to be exhausted in his two volumes. We shall be glad to find them obtain readers, thinking their object on the whole a good one. A competent authority informed the public the other day that the practice of confession was gaining ground in Protestant parishes. Forewarned is forearmed; and where the bane is discovered, it may be well to throw in an antidote in the shape of a copy of the Count de Lasteyrie's *History*.—*Examiner.*

Mr. Tennyson's Poem.—When Lord North corrected Burke for a false quantity in *vectigal*, (the quotation was in support of economy,) the great orator promptly acknowledged his error by repeating the line correctly, and thanking the minister for the opportunity of urging it again upon the house. We are going to follow Mr. Burke's example, and repeat more correctly a very fine passage misquoted last week from Mr. Tennyson's poem, and rendered quite unintelligible. It is that where the princess reveals the change which love has wrought in her. —*Examiner.*

"From mine arms she rose
Glowing all over noble shame; and all
Her falser self slipt from her like a robe,
And left her woman; lovelier in her mood
Than in her mould that other, when she came
From barren deeps to conquer all with love,
And down the streaming crystal dropt, and she
Far-fleeted by the purple island-sides,
Naked, a double light in air and wave,
To meet her Graces, where they decked her out
For worship without end; nor end of mine,
Stateliest, for thee!"

The Model Maid-of-all-work.—Her age is 14. Her arms are bare, and her feet slipshod. Her curls are rarely out of paper. She sports a clean apron on the Sunday, about tea-time. It is a mystery where she sleeps; some say the kitchen, in one of the large drawers; and others declare she has a turn-up bed in the hall-clock: but it is not known for positive whether she ever goes to bed at all. She has a wonderful affection for the cat. Everything that is missed, or lost, or broken, or not eaten, she gives unhesitatingly to him. She is not fond of the drawing-room, but has a good-natured partiality for the garret, who sings funny songs, and gives her occasionally an order for the play. She takes her dinner whilst washing the dishes, and never gets her breakfast till all the floors have done with the one teapot. She tries very hard to answer five bells at once, and in despair answers none. She always forgets the mustard, and prefers blowing the fire with her mouth instead of the bellows. Her hands will not bear minute inspection; and no wonder, for she is cleaning boots, or washing, or cooking dinners, all day long. She carries coals in a dustpan, hands bread on a fork, and wipes plates with her apron. She is abused by everybody, and never gets a holiday. She only knows it is Sunday by the lodgers stopping in bed later than usual, and having twice as many dinners to cook. She is never allowed to go out, excepting to fetch beer or tobacco. She hears complaints without a murmur, and listens to jokes without a smile. She gets £6 a year, and is expected to wait on about 20 persons, to do the work of five servants, to love all the children in the house, and to be honest for the money. It is not known what becomes of the Model Maid-of-all-work in her old age. It is believed, however, that she sinks into the charwoman at the age of 20. Landladies, be gentle to her!—*Punch.*

POLITICS OF THE WORLD.

The session of parliament reöpened on 3d Feb. with Lord George Bentinck's demonstration in favor of protection and the sugar colonies. The champion was curiously placed; since he is no longer the head of the protectionists, nor was he the chosen advocate of the West Indians. He is at odds with the country party, by whom, it should appear, he has been discarded; and, between him and the West Indians there are serious differences. For example, the West Indians ask changes in the navigation-laws, which he opposes; they demand extensive immigration, and though he does not oppose that measure, he throws upon it the discredit of his disbelief in its utility. His main object was to show that the free-trade measures which have emanated from Downing street of late have failed in their object; and the West Indies only formed an incidental section in his case. He made a suggestion for the suppression of slave-trading, which has the merit of boldness; Spain owes this country £45,000,000, secured on Cuba: Lord George would enforce payment of the money; in default of payment seize Cuba, and establish freedom of labor in that island. There would at least be a vigor and a degree of efficacy in that plan, that are altogether missed in the blockade of the African coast.

It is far too Cromwell-like a project for our ministers; they had nothing but a cento of small compromises. With the West Indies, "three courses" seem open to the statesman—to maintain a degree of exclusive protection, which should neutralize the advantage that slavery possesses in the competition with free-labor; to fit the West Indies for the struggle of competition, by securing to them supplies of free-labor equal to those secured for the slave-countries; to abandon the suppression of the slave-trade, resting the emancipation of the negro on his civilization in the West Indies. Ministers compromise all such courses. They will not establish thorough free-trade, either for the West Indies or the Metropolitan Kingdom, but keep up restraints or distinctive duties in distilleries and breweries; they will allow immigration, but only from certain quarters; they will not give up the African squadron, yet the chancellor of the exchequer admits that they cannot be consistent in opposing the institution of slavery by excluding its produce. They propound a set of small measures—inquiry, because it is supererogatory and useless; the limited use of molasses for distillation; a change in the navigation-laws; the advance of £200,000 towards the expenses of immigration; postponement of the repayment of an old loan, and a charitable aid to Tobago for damage inflicted by the elements. There is to be no free trade, no unrestricted immigration, no adherence to anti-slavery plans, no abandonment of anti-slavery plans. Sir Charles Wood is only clear on one point—that free-trade *against* the West Indies is good for the English revenue. These small compromises indicate vacillation and weakness.—*Spectator*, 5 *Feb.*

The close kin that exists between the principle of (so called) protection and the practice of pillage was very naïvely betrayed in Lord G. Bentinck's speech, in the close of which, to set things right in the West Indies, to put down slavery, and to put up the Spanish bondholders, he coolly proposed to seize Cuba! Would it not be cheap, he asked. And certainly the prime cost would be simply that of honor, honesty, and faith; and the secondary expenses probably only those of an European war, for the powers of the continent would not be very likely to submit quietly to the example of England's filching a Spanish possession.

The proposal indicates both the morality of "protection," and the statesmanship of Lord George Bentinck, who, whenever he comes into power, will do so on the principle of seizing Cuba as a cheap and easy solution of the West India question;—not to mention the collateral advantage of cutting the American trade in two—and at making minced meat of things, parties especially, Lord George is a matchless master, superior even to Sir Robert Peel. Such a prodigy, considering the age we live in, do we consider this proposal of Lord George Bentinck, that we cannot be satisfied without a transcript of it from the columns of the *Times:*

"He had read in the *Times* an extract from an United States paper, in which it was stated, that if the United States did not possess herself of Cuba, Great Britain would, and that England had a greater claim by one hundredfold to Cuba than the United States had to Mexico, because a sum of £45,000,000 was due to British subjects upon Spanish bonds, and Cuba was hypothecated for the payment of that debt. And why did the Americans think that Great Britain would like to have possession of Cuba? Because they knew she could never put down the slave trade so long as it was carried on at Cuba in its present form. He would therefore say at once, let them take possession of Cuba, and settle the question altogether; let them distrain upon it for the just debt due, and too long asked in vain, from the Spanish government. (Hear, hear.) They would put an end to the slave trade if they could emancipate the slaves of Cuba. If the people of this country thought it right to spend £150,000,000 in putting down slavery, and ruining our colonies besides, would it not be cheap policy to put an end to slavery forever by seizing Cuba?

"The chancellor of the exchequer.—But would you seize the Brazils as well?

"Lord G. Bentinck said the case of Cuba stood upon its own merits, and upon the debt of £45,000,000 due to British subjects from the Spanish government. Then, depend upon it, when Great Britain possessed the Havannah, as once she did, in 1762, when she held it for about a year, and then exchanged it for the Floridas, and when she would cut the trade of America in two, no more boasts would be heard of what the United States could do, such as that which was not long ago uttered by one of her military officers who declared that they never would be satisfied until Uncle Sam had set his right foot upon British Canada and his left upon California, embrace the whole of the eastern seaboard, and throw his leg, like a freeman, over the whole continent of South America to Cape Horn, with

Cuba for a cabbage-garden. That was the course which should be taken to put an end to slavery and slave-trading, and that having been done, there would be no difficulty in the British planter going to the coast of Africa and obtaining, not by purchase, not by war, but by the inducement of freedom and good wages, any number of Africans he might require for the cultivation of the soil."

This would be but a beginning of the foreign policy of the protectionists. The figure of the Hercules must be traced *ex pede* and upon the principle justifying the seizure of Cuba the repudiating states of the American Union would be conquered and made our own. It is well for Austria, in the event of a Bentinck ministry, that she has got out of the debt of England by a shabby compromise; but Greece may yet be sold up under a distress. The opposite poles of policy just now are obviously free-trade and free-booting; unrestricted commerce on the one side, and unrestricted rapine on the other. A Bentinck ministry would hoist the black flag of the buccaneer.—*Examiner*.

From the Spectator, 29 Jan.

IRELAND A STAGE.

ACTUAL life in Ireland seems to be conducted on the principle of burlesque. That principle consists in picking out the incongruities which lurk in any handling of a serious subject, and converting them into the main subject of the composition. So, in Ireland, the grave purposes of existence are neglected, and the follies or counterfeits of society become the business of life. In other countries, industry is engaged in earning subsistence; learning, in the advancement of knowledge; patriotism, in the struggle for improved government; commerce, in the extension of material wealth. In Ireland, industry is only exercised pro forma, and the earning of subsistence is far from being a primary object; learning busies itself in the promotion of ignorance; the people invest their money in anything rather than in commerce—rather than do that, they will sink it in repeal rents, in impracticable railways, or hoard it; and the better the government the worse it is abused by the collective patriotism. Lord Clarendon being one of the best viceroys that Ireland ever saw, it follows almost as a matter of course that the professed if not recognized leader of "*the* Irish party" pronounces him the "most injurious" viceroy. Among the active politicians whom Ireland suffers to represent her political society there is a perfect consistency of unreality: figment is uniformly preferred to fact, falsehood stands for truth; good influences are used for bad ends—pious obedience, for example, becomes useful in the promotion of murder; and the popular leaders, by a sweet harmony in their discord, for they are personally divided by endless factious feuds, coöperate to promote the greatest misery of the greatest number.

The usual state of society in Ireland is like nothing so much as a gigantic burlesque on the libretto of a tragic opera. Look at Archbishop M'Hale's rhodomontade in answer to Lord Shrewsbury; at the little tale in one of the letters in the *Times*, of an Irish lad who on being rescued from actual starvation "struck" for higher wages; at Mr. John O'Connell's dramatic display in Conciliation hall. In all this, and in every other phase of Irish society, there are the characteristics of the stage. Everything is valued according to its outward appearance, in front: the whole of Ireland is a stage, the men and women on it merely players. There is the laborer, who does no real work, nor anything else but "come on." There is the farmer, who is nothing but "a farmer" by title, for he does not till the land, nor let it, nor give it up to his landlord: but he too "comes on," to be virtuous, wronged, and indignant, and to talk of his "rights." There is the Ribandman, the ruffian or villain of the piece; who on the stage, and in Ireland, stalks about in broad day-light, wields his gun, shoots on a given cue, and walks off without the slightest obstruction from chorus or populace. There are the police, who give variety to the costume and the incidents. The landlord is "the tyrant lord of the manor," so familiar to English opera—the gentleman who is a landlord in the playbills only, and not in habit or practice; whose real business is only to amuse himself, to antagonize the man who does the heavy business and the wronged farmer, and to be shot at the end of the piece. There is the patriot, for the high tragic part. There is the priest, majestic, arbitrary, sonorous, ascetic; whose office it is to sing bass songs, or write letters from St. Jarlath's about things in general, but having nothing to do with the current business; copious in sustained "white notes" or white lies, in ponderous roulades or more ponderous billingsgate. Most ably supported, the action of the drama goes on; but, like the opera on the stage, it has no tangible results. The peasant digs nothing, and nothing cultivates. The landlord has no property, except the "properties" lent him by the property-man. The "sumptuous banquet" is empty dishes; the "flowing bowl" is empty. The only tangible produce is "the money taken at the doors"—of Conciliation hall; but that suffices not to disguise the wretchedness behind the scenes. The whole company is on the parish. Of course, "No money to be returned!" "Vivat Regina!" "Hurrah for Repeal!"

The court of justice used to be a fine scene for poetic eloquence and low comedy: the culprit was led off by his friends the gaolers to join his friends the witnesses in the green-room. But Lord Clarendon and the special commission are spoiling that stock scene, and threaten to spoil the whole piece in course of time; much to the indignation of those who maintain this "legitimate drama."

WOULD that we could omit Ireland from our survey of passing affairs! It is a subject that presents every element of disgust—triteness, revolting crime, misery, and perversity. This week, three Irish bishops have been writing—the reader knows what that means. The Bishop of Ardagh entertains the Repeal Association with a set vituper-

ative attack on Lord Clarendon, as an arbitrary, uncandid, and "injurious" viceroy. The Bishop of Derry, like a cricket-player, challenges "all England"—to a scolding-match. John Archbishop of Tuam has broken his discreet silence, but in a loquacity almost as discreet: instead of answering Lord Shrewsbury, he says nothing in an immense mass of virulent verbiage: called upon to repudiate or prohibit the priestly incentives to murder, he makes no response, but pours forth a torrent of abuse.

In the midst of his farrago, the mitred incendiary does not forget to beg. He pictures "a group of nearly twenty persons whose misery might melt the soul of an alien calumniator, all crying out to him for food for that one day's sustenance, and shrieking with agony that they were now thrown on the world to starve." "He that offereth sacrifice out of the goods of the poor," says the archbishop, "is as one that sacrificeth the son in presence of his father." So says the man whom we noticed last week sending 20*l.* to the repeal fund. But that does not exhibit all the perversity of the man: Dr. M'Hale is a defaulter in the payment of the poor-rate in his district. Although life itself may depend on the amount collected for the sustenance of the poor, Dr. M'Hale has *never* contributed to the rate!

Of all the insane refusals to enforce the law in Ireland, this resistance to the poor-law seems to us the most wicked. Dr. M'Hale is not singular. In some districts the law is reported to be "inoperative." Passive submission to famine is the deliberate choice, unless England choose to step in once more. She may if she likes. The Irish repudiate everything English except alms.—*Spectator*, 29 *January*.

The Irish news of the week exhibits certain traits of lawlessness so varied and so marked, that although they are as old as the hills they strike the mind with all the effect of novelty. Bishops, magistrates, farmers, and whiteboys, are conspiring to get up incidents, as if to oblige some Edgeworth or Lever with confirmatory materials.

The Roman Catholic Archbishop M'Hale is accused of a default in the paying of poor-rates—playing Ananias towards the poor. The imputation is denied: some part of the rates, it is said, have been paid. When? Since the charge was made?

Not to be too hard upon the notorious prelate, it must be confessed that the defrauding of the poor-rate collector is not limited to the ecclesiastical classes. Among the reports of criminal trials, is the prosecution of a man for sheep-stealing: the prosecutor was a substantial farmer, with land, grain, and stock, in goodly store; he admitted that the prisoner had been an honest and a starving man; the starving man had been refused out-door relief; the man of substance, now prosecuting for the stolen sheep, had received it! Can any more ludicrous and depraved perversion of the law be imagined? Conceive its effect, too, as avowed in such a case.

A third trait of the lawlessness is the resistance offered by Mr. Waldron, a magistrate, to a party of men who besieged the gates of his property to execute a process of law. It is an old tale in Ireland, but scarcely less marvellous in its recurrence to this day.

Read also the evidence of Garrigan, the approver, in the case of the men charged with shooting Mr. Bayley; he describes how the assassination was planned by the tenant Daly as an act of economy; the landlord was shot just as a beast of prey would be, to save the tenant from some loss; and the murderer was aided from the most friendly motives. As in America they have "husking frolics" and "building bees," so in Ireland the neighborly creatures join in a "killing bee." In India the villagers join to hunt down the tiger; in Ireland the object of that useful sport is the landlord. Garrigan thinks it worse, perhaps, to commit murder than to break a temperance pledge—he is not quite certain, but he thinks so. He would not murder *any* man, but he would murder any one to oblige a relative. "Would you shoot me?" asked the attorney for the defence. "By Gor! sir, I would." It is a matter of family politeness. Charity begins at home; to a stranger, probably, Garrigan would make a higher charge.

The concurrence of such cases throws some light on the state of society and the causes of crime. The condition of Ireland is so utterly anomalous, that curiosity is baffled in endeavoring to fix upon *the* cause. It is the priesthood, says one; the non-enforcement of law, says another; the unequal execution of laws—ignorance—popery—poverty—English misrule—a thousand things are named, now as causes, now as effects. Whatever the primary causes, *the* evil seems to be, that all the habits, customs, and feelings of society, tend to this lawless laxity. It is the *custom* to allow the law to go to waste, to live in squalor and disorder, to cheat the collector, to eject the tenant, to shoot the landlord; and custom is stronger than law. Alcibiades would have been a Ribandman, a Waldron, a John of Tuam, he would have eaten potatoes and shot landlords.—*Spectator*, 5 *Feb.*

The *Dublin Evening Mail* gives the following list of gentlemen in the commission of the peace who have attended the Cashel petty-sessions, with their liabilities—

"R. Long—father shot—himself twice fired at.
W. Murphy—father shot.
Samuel Cooper—brother shot.
Leonard Keating—nephew, Mr. Scully, shot.
E. Scully—cousin, Mr. Scully, shot.
Godfrey Taylor—cousin, Mr. Clarke, shot.
Wm. Roe—shot.
C. Clark—brother shot; a nephew, Mr. Roe, shot."

At Dublin, there was a stormy meeting of the Irish "Confederates;" the question of debate being "Peace or war:" Mr. Smith O'Brien proposed a set of resolutions to restore unanimity, and pledging the association to peace. Mr. Mitchell moved

an amendment in favor of war. He deprecated all "balmy balderdash" about peace and that sort of humbug. "There is," he said, "no opinion in Ireland, worth a farthing, which is not illegal." The debaters could not agree, and adjourned their discussion.—*Spectator.*

THE IRISH IN LIVERPOOL.—Since Monday morning, one hundred and sixty-nine Irish offenders have been brought before Mr. Rushton—an average exceeding forty per day! The borough gaol contains at this moment more than one thousand prisoners—five hundred being about the usual average—and the workhouse is so full that many shivering vagrants have been denied admittance.—*Liverpool Mercury.*

SICILY has rebelled, by rebellion has regained the constitution of 1812 or '21, has won a constitution of some sort for Naples, and has thus consolidated Italian Italy in a general bond of freedom. The conduct of the King of Naples was as paltry as it could well be; he absolutely rejected the early petitions of his subjects who urged him to follow the moderate example of the other Italian princes; when the Sicilians took up arms, he tried to suppress the revolt by cruel measures; finding tyranny becoming hazardous, he offered half-measures; and, meeting with more obstinate firmness than he expected, he granted all. The nature of revolt, its thoroughly national character, is indicated by the fact that it was led by men of rank and known discretion. The king's concessions were advised by his brother, the Conte d'Aquila. King Ferdinand has just escaped the fate of Charles the Tenth of France, and, as it were, doubles with that part the one of Louis Philippe.

The effect of this successful rebellion must soon appear. Should the subjects in the other Italian states remain in discreet alliance with their immediate rulers, the nationalization of Italy will be greatly hastened, as well as the progress of reform throughout the peninsula. The demand for a specific constitution like that of Sicily might breed ill feeling, and alienate the well-disposed princes. Austria will retrieve her strength, or lose it, according to the course of affairs in Central Italy. If rulers and people remain united, Austria must either fall into the custom of the day, or consent to lose her Italian possessions.

Already the success of the Sicilians has had the usual influence in commanding assistance. M. Guizot, who inclined to Austria while the Italian cause seemed doubtful, has now discovered that France sympathizes with Italy, and sanctions even organic changes. The conversion of the astute statesman took place all on a Sunday. On Saturday, M. de Lamartine made an eloquent attack on ministers for abandoning the traditional policy of France in Italy; but M. Guizot was coldly imperturbable, unshaken as to his faith in Austrian moderation and enlightenment, and firm in maintaining the status quo. On Monday, instigated by a penetrating, brilliant, and dangerously statesman-like speech from his great rival, Thiers, M. Guizot suddenly remembered that France and he had all along sympathized with the regeneration of Italy. M. Guizot, it is clear, has at last perceived, what we ventured to assert months ago, that France herself adheres to the Italian alliance, and that the official government cannot safely array itself on the side of Austria.—*Spectator, 5 Feb.*

EMANCIPATION OF ITALY.—There have been stirring debates and most eloquent speeches in the French chamber. The members of the liberal party seem to have awakened from a long trance, during which jealousy to England absorbed their thoughts and energy. Of a sudden this spell has been dissolved. The Italians are struggling for their freedom, and Englishmen and Frenchmen, both sympathizing with and eager to help them, see how efficacious their help would be, were the countries united. What is the obstacle? Simply M. Guizot having quarrelled with England about the Spanish marriages, and his having in consequence formed a close alliance with Austria. The question now is, shall Italy be sacrificed to this alliance? Shall France disgrace herself by aiding Austria to enslave the Italians, whilst England takes the glorious part of striving in their behalf?

Such is the question that M. Thiers asked with consummate eloquence from the tribune of the chamber; such the question mutually put by press and public. Mr. Cobden desires the mission of peace-maker, and now is the time for him to come forward. He has no need of appeasing the French by disbanding the British army and laying up the British navy in ordinary. He has but to propose a frank coöperation to save Italy, and a mutual sacrifice of French and English pretensions in Spain on the altar of Italian liberty.

It is no easy task to rear that altar. We cannot conceive a more difficult political problem, than, given the pope and his supreme power, to establish in and around his dominions a free or representative government? If there are immense objections to the pope being swayed by Austrian or by French councils, what is to be said of the papal cabinet being forced open by a constitutional opposition, which has acquired a majority in a Roman parliament? M. Guizot says, the great object is to reconcile the Catholic religion and its chief with the ideas and liberal progress of the age. M. Thiers adds, that this can only be done by secularizing the Roman government. One says, that in the difficulties of reform the priest will save the sovereign; the other, that the sovereign will save the priest. We must own that we ourselves, though influenced by a sincere desire to be neither extravagant nor extreme, cannot but consider the pope as a huge anomaly, a monster fragment of the great wreck of the middle ages, still surviving for no purpose except as a shoal and an obstruction. And with all our respect for Pius the Ninth, we do not see how either the priestly part of power is to save the monarchical, or *vice versa*. Unless, indeed, as M. Mariotti suggests, the Ferretti were to form a dynasty of popes and proclaim themselves

the chiefs of free Italy, sacerdotal and lay. Here, however, would be the end of the universal popedom.

The Sicilians, however, have made the important step. They have deposed a vacillating despot, driven him and his troops out of their capital, and rejected his offers of state councils and quasi-independence, insisting on nothing less than the constitution given by Lord William Bentinck in 1820. This constitution is very favorable both to the clergy and the noblesse, and would rally these classes, as well as the rural population, in its favor. But unfortunately its house of commons is a very diminutive assembly. Sicily, divided into twenty-three districts, would elect but two members each district, which, with six for Palermo and three for the other great towns, would form a very small body for the national representation. Had Ferdinand of Sicily any wisdom, he ought to be contented with such a constitution; nay, ought to have grasped at it, since it gave him an upper chamber, like that of Westminster, which could be made a firm bulwark of the throne. The king has, however, flung them away, and prefers something "on the basis of the French Charter." What this something is he does not appear to say; but the Sicilians will probably ask him, and the Neapolitans too. The latter people despise their noblesse, and would gladly do without a chamber of peers. Therefore the refusal of the constitution of 1812 is no unwelcome act to them. But to the Sicilian nobles it will prove the contrary; and it may impel them to unseat Ferdinand altogether, and divide the island of Sicily from the mainland of Naples.

But then comes the consideration that the king has married an Austrian princess, and that Austria will desire to intervene. The pope denies the Austrians passage. But the Austrians can go by sea. It is not for the pope to bar their passage by this route; it is for France and England.

Have they courage?—have they unity for this? That is the question.—*Examiner.*

ODE TO SICILY.—BY WALTER SAVAGE LANDOR.

1

Few mortal hands have struck the heroic string,
Since Milton's lay in death across his breast.
But shall the lyre then rest
With vilest dust upon it? This of late
Hath been its fate.

2

But thou, O Sicily! art born again.
Far over chariots and Olympic steeds
I see the heads and the stout arms of men,
And will record (God gives me power) their deeds.

3

Hail to thee first, Palermo! hail to thee
Who callest with loud voice, "*Arise! be free,*
Weak is the hand and rusty is the chain."
Thou callest; nor in vain.

4

Not only from the mountains rushes forth
The knighthood of the north,
In whom my soul elate
Owns now a race cognate,
But even the couch of Sloth, 'mid painted walls,
Swells up, and men start forth from it, where calls
The voice of honor, long, too long, unheard.

5

Not that the wretch was feared,
Who feared the meanest as he feared the best,
But that around all kings
Forever springs
A wasting vapor that absorbs the fire
Of all that would rise higher.

6

Even free nations will not let there be
More nations free.
Witness (O shame!) our own,
Of late years viler none. .

7

To gratify a brood,
Swamp-fed amid the Suabian wood,
The sons of Lusitania were cajoled,
And bound and sold,
And sent in chains where we unchain the slave
We die with thirst to save

8

Ye too, Sicilians, ye too gave we up
To drain the bitter cup,
Which ye dash from ye in the despot's face . .
O glorious race!

9

Which Hiero, Gelon, Pindar sat among
And praised for weaker deeds in deathless songs;
One is yet left to laud ye. Years have marred
My voice, my prelude for some better bard,
When such shall rise; and such your deeds create.

10

In the lone woods, and late,
Murmurs swell loud and louder, till at last
So strong the blast,
That the whole forest, earth and sea and sky,
To the loud surge reply.

11

Within the circle of six hundred years,
Show me a Bourbon on whose brow appears
No brand of traitor. Change the tree,
From the same stock forever will there be
The same foul canker, the same bitter fruit.
Strike, Sicily, uproot
The cursed upas. Never trust
That race again: down with it; dust to dust.
Examiner.

We have yet to learn the most interesting and important of the consequences of the Sicilian revolution, namely, its effect on the adjacent states of Italy and on the decision of the cabinet of Vienna. In both quarters that effect will be extremely great, and we fear that it will tend to excite the passions of anarchy in one direction, as much as the fears of absolutism in another. At this moment, too, the leading orators of the French chamber have been engaged in a discussion on the delicate and complicated affairs of Italy in a manner which demonstrates that, whatever may be the disposition of M. Guizot's cabinet, it will be impossible for France to tolerate any aggression of Aus-

tria on the rights of the independent states of Italy. The papal government has already given a decisive refusal to the Austrian application for the passage of troops, and announced its intention of defending the neutrality and independence of the dominions of Rome by all the weapons it can command. Can Austria, then, dare to run the risks of war in Italy, with her finances exhausted, her alliances shaken, and the certainty that France would sooner or later be driven to espouse the popular cause? Can she, on the other hand, avow to Italy and to Europe, that in principle she is already vanquished, that her ascendency over that peninsula is annihilated, that the interventions of 1821 and 1831 are now beyond her power, and that the defence of Lombardy is all that remains of the Italian policy of Prince Metternich? Either alternative is equally formidable—the choice between them more formidable still; yet that option is the only power Prince Metternich still enjoys; the rest is beyond his control.—*Times*.

A STATISTICAL account of the population of Italy, up to the end of last year, gives the following results:—

The Two Sicilies, . .	8,566,900
Piedmont & Sardinia, . .	4,879,000
Roman States, . .	2,877,000
Tuscany and Lucca, . .	1,701,700
Monaco, ...	7,580
Saint Marino, . . .	7,950
Modena, ...	483,000
Parma & Placentia, . .	477,000
Venetian Lombardy, . .	4,759,000
Italian Tyrol, . . .	522,608
Istria, ...	485,000
Total, ...	24,567,238

A LETTER from Constantinople of the 17th says:—"The pope's nuncio, Mgr. Ferrieri, arrived yesterday at Constantinople, on the Sardinian steamer the *Tripoli*. A very brilliant reception was given to him. After the usual salutes were exchanged between the Sardinian packet-boat and the foreign vessels of war, the nuncio, accompanied by the Catholic Armenian patriarch, disembarked at Top-Khane in a superb boat with five pairs of oars, which was placed at his disposal by the government. He was then conducted with the other persons of the mission, in carriages belonging to the court, to his hotel at Pera. The crowd which assembled on his passage cried, 'Long live Pius IX! Long live the liberty of Italy!' The nuncio from these cries might almost have believed that he had not left Rome. Immediately after reaching his hotel he received the congratulations of the diplomatic body, and of the deputations of the different religious communities, united and not united. The porte has given him the hotel he occupies, and will pay all his expenses whilst he remains here, which will be for two or three months. Among the persons who form part of the nuncio's suite are Monsignor Vespesiani, the Canon Capri Galanti, Count Ferretti, nephew of the cardinal and cousin of the holy father, and Count Marchetti."

From the Spectator.

HISTORICAL PARALLELS: SWITZERLAND AND POLAND.—There are some historical events cited as parallels, which are very angular illustrations—having one point in common, the further they are traced the more they deviate. The affairs of Switzerland, however, do seem to afford a parallel to the proceedings which terminated in the partition of Poland.

Take these passages in the *Edinburgh Review*, said to have been written by Sir James Mackintosh.

"The death of Augustus, in 1733, had nearly occasioned a general war throughout Europe. * * The court of St. Petersburg then set up the fatal pretext of *a guarantee* of the Polish constitution, founded on the transactions of 1717. A guarantee of the territories and rights of one independent state against others, is perfectly compatible with justice; but a guarantee of the infstitutions of a people against themselves, is but another name for dependence on the foreign power which enforces it. In pursuance of this pretended guarantee, the country was invaded by 60,000 Russians, who ravaged with fire and sword every district opposed to their progress."

The writer then remarks on the *liberum veto*, which enabled every nuncio to stop every public measure if he dissented from it; and he adds—"Generally speaking, the absolute negative enjoyed by every member of the Polish diet seems to have arisen from the principle that the nuncios were not representative, but ministers; that the power of acting was limited by the imperative instructions of the provinces; that the constitution was rather a confederacy than a commonwealth, and the diet not so much a deliberative assembly as a meeting of delegates, whose whole duty consisted in declaring the determination of their respective constituents."

The result was, that war between the majority and minority was legitimate, and neither party were treated as rebels, for both were composed of members of the sovereign class. "The ordinary was converted into a confederate diet, and is perhaps the most singular example in history of a legislative assembly assuming the form of a party in civil war in order to escape from the restraints of an inconvenient law."

The French government, by its note of the 18th January, 1848, has formally declared, that no change shall be made in the federal pact of Switzerland without the unanimous consent of the twenty-two cantons. Its right of interference is founded on its having been a *guarantee* as respects the independence of the republic.

We have, then, foreign nations interfering in the internal organization of the government of Switzerland under the pretence of asserting guaranteed rights; the diet of Switzerland assuming the form of a party in the civil war; the present state of the organization of Switzerland requiring change to prevent the recurrence of such an event, and such change forbidden by foreign powers.

Is the result to be, that on account of civil dissensions which may occur if no organic change is made in the pact, foreign troops may ravage with fire and sword every district opposed to them; and then a partition of Switzerland, having the protectorate of neighboring governments for its several portions; those portions finally to be absorbed in the territory of neighboring states?

Behold the fruit of a guarantee!

From the Times.

M. THIERS.—The speeches delivered by M. Thiers in the course of that general review of the politics of the world which takes place before the chamber of deputies in the beginning of the year, do credit to his talents and his sincerity. Although he evidently participates in the passions which are excited at this time to an extraordinary degree against the French ministers, he has abstained from the more dangerous and excessive demonstrations of the radical party, and confined himself within the limits of a policy which might be pursued by a government. In short, whilst others have been indulging in the extravagance of declamation, M. Thiers has sought to convince the French chamber, and the rest of Europe, that his views are still governed by the principles of a statesman. We, therefore, give him the credit due to some discretion, as well as sincerity; but, although we believe that he has frankly stated his opinions, and that those opinions have no immediate connection with the wild schemes of the French radicals, we hasten to add that these speeches have in no degree increased our confidence in his political character or our sympathy with the cause he defends. We do him no injustice in saying that this cause is the cause of the French revolution. He began his political career as the ingenious, eloquent, and unscrupulous defender of revolutionary governments; he is now completing that part of his labors by an equally elaborate and fantastic panegyric of the man by whom all the despotic, aggressive, and anti-social tendencies of the revolution were raised to their highest power. In public life he has professed his adherence to the same creed, especially since he exchanged the cause of the government for that of the opposition. His policy avowedly is to promote, by means adapted to the present state of his country, and of the world, the same objects which have been marked out at different times, and by different powers throughout the course of the greatest convulsion in modern society. It cannot be repeated too often that the French revolution, or rather the revolution in the affairs of Europe, produced mainly by the dissemination of French principles, is not an event terminated, concluded, and accomplished, but that it is still and continually in progress. It is still fomenting the same hatred of religious aristocratical institutions and privileges; it is still subverting the principles of authority to which men yielded in former ages a loyal or unconscious obedience; and though it cares but little for the evils of anarchy or the benefits of genuine liberty, no sacrifice is too great to throw off and extirpate the natural checks to democratic license. To use M. Thiers' own words—"I am," said he "of the party of the revolution in Europe; I wish the revolution to be carried on by the hands of its moderate supporters. I shall do all that I can to keep it in the hands of that moderate party, but if it should pass into the hands of a party not moderate, I shall not abandon the cause of the revolution. I shall be always of the party of the revolution." These expressions deserve to be remembered—and especially by those who have affected to regard M. Thiers as the champion of an alliance with this country. This country must, indeed, be strangely changed before it would select an avowed French revolutionist as the object of its confidence and respect. M. Thiers proceeded to apply these principles to the Swiss question. In his opinion, the revolution and the counter-revolution are there at war; and we cannot be surprised that the man who as a writer could palliate the black crimes of the French convention should, as an orator, find it a very easy task to excuse the conduct of the Swiss diet. The Swiss have certainly not exhibited the fanatical levity or the sanguinary violence of the Parisian sections of 1793, but they have shown enough of the revolutionary spirit to entitle them to M. Thiers' applause. The success of the late campaign, the expulsion of the Jesuits, and the complete subversion of the legal governments in the conservative cantons, have not been followed by the species of pacification we ourselves had at one moment hoped for. The promise of an amnesty, and of other conciliatory measures, though made to Sir Stratford Canning, is still so distant that four of the principal members of the moderate party in Switzerland have resigned their commissions on the federal staff, because they feel themselves compelled to withdraw the support they had hitherto given to the government. In spite of the indignation caused throughout Europe by the unworthy proceedings of the government of the Valais, supported by federal commissioners and federal troops, at the Monastery of St. Bernard, these outrages have continued. The occupation took place on the 15th of December; on the 12th of January the garrison, still remaining there, ordered the monks to be confined to their cells, which were guarded by armed sentries, and permission was reluctantly conceded to the fathers to attend divine service in the chapel. On the 21st of January they were forcioly driven out of the monastery by the soldiers, and compelled to march to the infirmary at Martigny; afterwards even that refuge was denied them. In the Canton de Vaud the legislative council has been engaged in the discussion of a law for the complete suppression of all religious worship not in connection with the established church, and this enactment has been carried by 64 to 38 votes. The avowed object of the measure is to annihilate the Protestant evangelical sects, or, as they are improperly termed in Switzerland, the Methodists. These unfortunate sects will now be persecuted with as much ardor as the Jesuits have been. They are called the

Protestant Jesuits; and, accordingly, the purest Protestant democracy in Europe puts in force against them a law scarcely less intolerant than the revocation of the Edict of Nantes. Already there are in London at this time fugitives from the Swiss cantons who are not monks or Jesuits, but Protestant pastors and Christians, proscribed and banished for having sought to worship God in their own way. M. Thiers is right; these are indeed triumphs of liberty which may well remind him of the favorite passages in his *French revolution*. We must, however, deny the converse of the proposition, which he seeks to fix on his opponents. It is not true that all who are not partisans of his revolutionary theory are therefore counter-revolutionary—that is, the partisans of repressive measures almost equally contrary to the rights and interests of mankind, and it is a gross misrepresentation to thrust his antagonists into the one extreme because they recoil from the other. In the name of this country, at least, and in the name of a large and enlightened party in France, in Germany, and elsewhere, we may assert the influence and the worth of principles equally opposed to the violence of the Swiss diet or the French convention, and to the policy which is professed by the cabinets of Vienna and St. Petersburg. The best friends of liberty are anti-revolutionists, without being counter-revolutionists; that is, they reject the pretended benefits which are purchased at the expense of justice and right, without being the more disposed to thwart or oppose the progress of rational reform. In that middle course lies the only safe track for those who are intrusted with the management of public affairs, and he would prove a dangerous guide who should allow his sympathies or his fears to urge or to repel him to either extreme. In spite, therefore, of the moderation of the tone of these speeches of M. Thiers, there is that in the stamp and purpose of his mind which identifies him and his party with the enemies of the tranquillity and the permanent interests of Europe.

The following are the most prominent passages in the address of the second chamber of the states of Wurtemberg, in answer to the speech from the throne:—

"We participate in the convictions of your majesty, that the present state of the periodical press in Germany does not answer either to the just expectations of the governments or to the wants of the people. May the propositions presented by your majesty to the diet bring about a legal establishment of the freedom of the press in all Germany, and quickly insure to the people the faculty of making their opinions freely known. Will your majesty permit us, the representatives of your faithful subjects, to hope for a greater liberty for the press, in discussing the internal affairs of the country, in conformity with the words your majesty has addressed to us, and with the fundamental law. Incessantly occupied in developing our legislation, your majesty announces to us that at the next diet we shall have several judicial reforms, in consonance with the wants of the age. Filled with joy and gratitude towards your majesty, the august protector of German nationality, we hail this measure as a first step towards a common legislation for all Germany. We shall examine with the greater interest the other bills which may be submitted to us, as we are so fully convinced that our epoch urgently requires reforms in the administration of justice. Your majesty has deigned to make allusion to a neighboring country, with which we have numerous relations. If we should experience any serious alarms for the public order and tranquillity of our country, your majesty will find in the whole body of your people that good spirit which never recoils from making any sacrifice for the maintenance of order and right in the country. Strong in the union and reciprocal confidence between the sovereign and the people, we shall rally round the constitutional throne of our beloved king, and meet with calmness the coming storms."

The *Prussian Universal Gazette* gives the following statistical account of the Jewish population of Europe. England and Ireland, 13,000, being only the 2076th part of the whole population Belgium, 1954, the 2157th of the population Sweden and Norway, 850, the 5012th part of the population; Denmark, 6000, the 356th part of the population; France, 70,000, the 487th part of the population; the Netherlands, 52,000, the 61st part of the population; in Russia, including the Asiatic portion, the Jews form the 56th part of the population. The states of Austria, 641,000, being the 57th part of the population; in Italy, with the exception of the Austrian provinces, 40,000; Germany, not including Austria and Prussia, 175,000; Prussia, 222,814, being about a 74th part of the population.

From the Spectator.

Progress of Cheap Postage.—We print a table showing the increase in the number of chargeable letters delivered in the United Kingdom, in each year from 1839 to 1847 inclusive. The first year in this table was the last of the old system, and in that year the number of chargeable letters delivered within the United Kingdom, excluding franks and letters sent abroad, was 76 millions; in the last year of the series the number was 322 millions, or an increase of 325 per cent. A continued annual increase of nearly 40 per cent. shows that the public is responding to the concessions which are made to it, and is steadily advancing in the habit of correspondence by letter. As a matter of taxation, also, the new system, so far as it has been carried, is eminently successful. The post-office used to produce a net revenue of about a million; the first effect of reduced postage was a fall in the revenue; but that also has steadily advanced. In the published revenue-accounts the post-office has but once figured under the head of "decrease," for the trifling sum of 8,000*l*. The tables usually printed in the newspapers fail to show the actual revenue accruing to any department; they are limited to Great Britain, excluding Ireland; also they only show the money paid by the department to the exchequer. In the case of the post-office, this fact operates the more forcibly on the

aspect of the published accounts, since the increase of business causes a larger amount of balances to be left in the hands of post-masters, and thus there is a continual tendency to abate the apparent increase in the account of the money that reaches the exchequer; a tendency which will continue while the department is in its present state of rapid growth. Another cause of apparent abatement in the revenue is, the amount of increased expense thrown on the department other than that due to the simple cost of transmitting correspondence. For example, to take only one item, there has been an immense increase in the number of newspapers transmitted by post, and the expense of course falls on the department; but the increased revenue derived from the newspaper-stamp, which is defended as a real postage, is set down to the credit of the stamp-office. In spite of all these abatements, the net revenue displayed in the revenue-accounts for the past year was 864,000*l.*

The moral taught by this steady increase both of letters and revenue in the post-office is, that increased facilities for the public bring a corresponding increase both of business and profit to the department. But this fact comes out still more strongly on a scrutiny of the details. The last column in the table is particularly instructive; it shows the annual increase per cent. in the number of letters, as compared with the number in 1839, for each of the eight subsequent years, as follows—

123 ... 36 ... 14 ... 18 ... 28 ... 39 ... 37 ... 30

Let the reader glance at these figures while we recite two or three facts. In 1841 the whig ministry went out of office; and Mr. Goulburn, Sir Robert Peel's chancellor of the exchequer, had hardened his heart against faith in post-office improvements. His predecessor had contemplated a plan for adding to the number of rural posts; and a first step in that direction was to have been made, at a cost of 7,000*l.* or 8,000*l.* Mr. Goulburn rejected that plan, as "expensive;" and in 1842–3 little was done to extend post-office communication. In 1843, however, there was a parliamentary agitation; the post-office again began to extend its facilities; and the annual increase, which received so remarkable a check in the two years of torpidity, again thawed into active motion. Even the commercial distress of 1847 had no such effect in abating the annual *increase* as the official torpidity of 1842–3. And from what we have noted above, it may be inferred that, in spite of the "expense" which Mr. Goulburn so much feared, the increased facility has been profitable to the department.

We have here considered only the facilities afforded by direct regulation—we have in fact limited our view to the results obtained from the partial and gradual adoption of Mr. Rowland Hill's plans. We are well aware that there are auxiliary facilities to be afforded from measures with which Mr. Hill has nothing to do, and especially by the removal of abuses which impede the efficiency of the establishment. It is to be remembered that the post-office differs from the other revenue departments in being not only a tax-collecting office, but also a trading corporation of public carriers; it is therefore bound to employ efficient servants. In no department, however, has the system of patronage been more grossly abused by the appointment of persons among the subordinates wholly unfitted for the duties. At present we abstain from entering into that branch of the subject; only noting the fact here, as causing one of the most serious abatements in the apparent advance of the post-office and its revenue.

The following is an estimate of the number of chargeable letters delivered in the United Kingdom in each year from 1839 to 1847:

Year.	Number of Letters.	Annual Increase. Number of Letters.	Per cent. reck. on the num. for 1839.
1839*	76,000,000†	———	———
1840	169,000,000	93,000,000	123 per ct.
1841	196,500,000	27,500,000	36 "
1842	207,000,000	10,500,000	14 "
1843	220,500,000	13,500,000	18 "
1844	242,000,000	21,500,000	28 "
1845	271,500,000	29,500,000	39 "
1846	299,500,000	28,000,000	37 "
1847	322,000,000	22,500,000	30 "

M. Guizot's want of moral sense has been betrayed in another affair; not so important in itself as the pacification of Switzerland, but momentous as the overt sign of a deplorable official corruption in France. A practice has obtained of permitting private persons to purchase the resignation of people in office, in order to make a vacancy for the purchaser. That is not all: the purchaser does not always pay for the vacancy to which he is appointed, but sometimes for another vacancy which a minister wishes to fill up with a third party. In effect, therefore, a candidate for office purchases his place with an indirect bribe to the minister. And it is disclosed that M. Guizot has been a party to such transactions; a M. Petit, whose case was brought before the chamber of deputies, having twice effected such an operation. M. Guizot's defence was the worst part of the affair. In terms he condemned the practice; but he excused the particular bargains on the score of long-continued usage, averred that there had been no recent instance, and promised a law to prevent the abuse in future. In other words, M. Guizot is virtuous when found out. He acts on the maxim which was the flaw in Bacon's philosophy, and probably caused his downfall—that falsehood is like an alloy, which makes affairs work better. As a man of letters, he will write in a high historic vein; as a working statesman, he accepts a lower standard.

* The estimate for 1839 is founded on the ascertained number of letters for one week in the month of November; and, strictly speaking, it is for the year ending December 5, at which time 4d. was made the maximum rate. The estimate for each subsequent year is founded on the ascertained number of letters for one week in each calendar month. (Vide return to the house of commons, No. 586, 1847.)

† This is exclusive of about 6,500,000 of franks.

But this incident does not stand alone; it belongs to the same class with the affair of M. Teste and General Cubières—another indication of the wide-spread corruption that undermines French society. Those whom France has for enemies will rejoice at it, since it weakens her: her strength is sapped by domestic treachery, in which the highest of her official men partake: she cannot trust her own citizens, however exalted by talent or station.—*Spectator*, 29 *Jan.*

A QUESTION of some interest, respecting the custody of an infant, was decided on Monday, in the Bail Court, by Mr. Justice Wightman. The child, Margaret White, aged eight years, (her father's name was Thurston,) was brought up under a writ of *habeas corpus*. She was illegitimate, and the application was made on behalf of the mother, who alleged that the girl had been stolen from her. The infant had been originally placed by the father and mother at nurse with a Mr. and Mrs. Browne, with whom she lived seven years; Mrs. Browne being the sister of the child's father. In consequence, however, of a disagreement between Mr. and Mrs. Browne, which led to their separation, little Margaret was removed, and placed under the care of Mr. and Mrs. Buckingham; who, it was alleged, were bringing her up in the Roman Catholic faith, and intended to rear her for the stage. (Mrs. Buckingham belongs to the Haymarket Theatre.) An application was made by Mr. Browne to the Buckinghams to give up the child to him, on the ground that his father and sister believed it to be his, and were disposed on that account to leave it some money. The request was refused by the Buckinghams. In November last, while the little girl was playing in Golden Square, she was taken away by Mrs. Browne, and conveyed to Cambridge; hence the present proceedings. An attempt was made, at the suggestion of the judge, to arrange the matter out of court; but the parties could not come to terms. The case then proceeded. Its result appeared to turn on a long conversation which Mr. Justice Wightman held on the bench with the little girl, who displayed remarkable intelligence. After this conference, the judge expressed his opinion that Margaret White had not been *taken* away, but had accompanied Mrs. Browne willingly. Indeed, it was very evident from her demeanor in court, that she entertained a strong preference for the Brownes over the Buckinghams. It also appeared that Mr. and Mrs. Browne were again living together. It was therefore ordered that the girl should remain with Mr. and Mrs. Browne, the mother being allowed access at all reasonable and seasonable times.

A TOULON correspondent of the *Times* recounts some interesting facts respecting Abd-el-Kader. "I have seen the emir. It is quite a mistake that his eyes are black; they are of a decided gray, shaded by very long black eyelashes. He speaks very fluently; which is a proof of high distinction among the Arabs. Whatever may be the reputation of Abd-el-Kader as a soldier, politician, or Mahometan priest, it is much greater as a literary man. He is said to be as learned as an Arab can be. Two leather trunks, containing his library, have always accompanied him, even during the last months that preceded his submission; they also made part of his personal baggage on board. But every one is ignorant of the real cause of his submission, which was love. He is another Antony. After having endeavored with heroic courage to make a passage through the Moorish camp, he succeeded, with a considerable number of his followers, in sufficiently disengaging himself to be able to gain the desert; but at the moment he was about to profit by the liberty this last coup de main gave him, he heard the firing which had reached his deira. Then, like the lion of the desert who sees his lioness entrapped and his cubs carried away, he retraced his steps and fell upon the Moors, with the rest of his faithful followers; whilst the cries of his wives, whose tents the enemy had commenced pillaging, exalted his courage. Twice the emir was rolled to the ground with his horse wounded under him; twice surrounded and seized, he released himself by his extraordinary agility, and gained a victory by hard fighting in the midst of a victorious retreat." * * * "At last, abandoning his deira, which enclosed all his affections, to our generosity, he departed, in order to regain the south. After two nights' march, though certain of saving himself, his heart softened at the idea of his isolation, and, preferring captivity with his friends, he returned to treat with us." * * "The emir is still confined in his sad prison. He reads the Koran to his faithful followers. During the prayers, they open the windows and make a large fire in the middle of the room. His mother cries, his wives sob, and he is almost broken-hearted. It is said, the only thing which consoles him is that the unfaithfulness of his enemy aggravates his misfortune."

WE find the following in the *Union Monarchique*:—

"We have before us a letter from Toulon from which we must extract a few passages as likely to be interesting to our readers. It speaks of Abd-el-Kader in manner to make us believe that he is decidedly a very superior man. He bears his misfortunes with unalterable dignity and mildness. Deceived by war, he consoles himself with faith. One expression of his paints him to the life. The other day, he said to an officer, 'the other world is as to this like the East to the West. We cannot approach the one without turning away from the other.'"

INSCRIPTION FOR THE PROPOSED PYRAMID TO COMMEMORATE THE CAPTURE OF ABD-EL-KADER.

Regione quondam Punicâ Franco-Gallis occupatâ,
Punica fides ab iisdem suo more servatâ,
ABD-EL-KADER,
qui sese ultro invictus dederat,
amicis, exercitibus, regno, libertate,
privatus est à L. Philippo rege.—W. S. L.

It having been found necessary to suspend the steam-packet service between Havre and New York for a time, notice has been received from the director-general of the French post-office, that no letters will be transmitted by that channel until further notice.

The return of her majesty's ship Cormorant from the Oregon Territory has made known the fact that there are immense quantities of excellent coal on Vancouver's Island, lying near the surface. The Cormorant supplied herself with fuel at the rate of 4*s.* a ton; the price at Valparaiso being 1*l.* 6*s.* The coal was worked by the natives.

The celebrated French artillery-officer, Lieutenant-general Paixhans, has, at his own request, been placed upon the reserved list. Having always been of opinion that aged officers should retire to make room for those more fit for active service, and having expressed this sentiment in the committee which prepared the law on the general staff of the army, he has resigned his situation as member of the committee of artillery.

The Prussian papers give a most awful description of the want and distress in some parts of Silesia: according to them, it is much greater than even in the worst parts of Ireland. A society, under the auspices of Count Brandenburg, had been formed at Berlin for the relief of these unhappy districts.

The maritime city of Augusta, in Sicily, has been wrecked by earthquake. A first shock of great violence drove the people from their houses; the fatal second shock then worked such destruction that only twenty-seven houses remained standing. Where the mole lately stood the sea now gives no bottom at fifty fathoms. Fifty-nine citizens had been drawn out of the ruins, wounded, but alive; thirty-five dead bodies had been recovered.

A recent attempt at boring for water in Venice has proved a total failure, and has been completely abandoned, with a net loss to the French company of three or four hundred thousand francs. The project of M. Grimaud de Caux to furnish the city with pure river water by an aqueduct has again risen into favor, and will probably be adopted by the local authorities.

A letter from Baumes-les-Dames, on the Doubs, states that the country round that place is infested with wolves. A few days ago, as two children, one ten years of age, and the other eight, were on their way home from a farm-house, they met a wolf; and on their attempt to fly, the younger child fell, and was immediately carried off by the wolf into a neighboring forest. A diligent search was made, but no trace of the child could be found.—*Galignani's Messenger.*

A colonial community of seventy-five persons, of all professions, who will live as brothers and wear uniform clothing, have left Havre for a district to be named Icarienne, on the Red River in Texas, of nearly a million acres.

Another expedition, to proceed by Behring's strait in search of Sir John Franklin, is to be immediately fitted out, under the command of Captain Sir James Clark Ross. It is to consist of two ships, of 470 and 420 tons respectively, which are entirely new, and are to be appropriately named the "Endeavor" and the "Resolution," after Cook's ships. They are to be fitted at Blackwall by the 1st of April, and will be commissioned in a few days. They will follow up Sir John Franklin's track to Baffin's bay.

The agricultural report for January is very satisfactory as regards the winter corn. Indian corn-meal has come into favor with the graziers; and large quantities have been taken for feeding purposes. There is an immense quantity of hay still on hand, and cattle of all kinds fare remarkably well. The early lambing season has been very favorable, particularly in Sussex, Hampshire, and Dorsetshire.

The mayor of Boston in Lincolnshire has declared his determination to preside at no public dinner where drinking customs are permitted.

A guinea-pig, on which Mr. Brande had experimentalized in a recent lecture on chloroform, has since died. It did not rally after the second administration of the vapor.

The first of the eight great iron tubes required for carrying the Chester and Holyhead railway over the Menai strait was tested on Saturday, at Chester, in the presence of Mr. Stephenson the projector, and a large number of engineers. All support being removed, the tube had a clear span of 400 feet, each end resting on a stone pier. The experiment was then made by running locomotives and heavily-laden ballast-wagons through; one train of 28 wagons filled with iron, weighing upwards of 300 tons. The deflection of the tube was not more than a few inches.

The Cab-stand Nuisance.—In a letter to the *Builder*, Mr. F. H. Waller, an ingenious surgeon with a turn for practical invention, suggests what would be a very great improvement in the regulation of our streets—the removal of cab and coach stands. He proposes that the cab stands, like the mews, be situated out of the public thoroughfare; and that they be covered sheds, so that the vehicles should stand in readiness for immediate use, yet with driver and horse protected from the weather.

"These buildings might be so constructed as to insure thorough drainage, complete preservation of the product, and perfect ventilation, as well as to afford every comfort to man and horse, and save much disease and suffering to both. To render them easy of being found, the same plan might be adopted as the admirable one now in operation for securing this advantage to the post-offices. The vehicles might be arranged numerically, and all squabbling for precedence, now so annoying, be avoided. The entrance of each stand might be sufficiently conspicuous, and bell-handles, labelled 'coach,' 'cab,' &c. Thus, a person requiring either of these vehicles, would look for the lamp-post

indicating the situation of the stand; he would signify his want by pulling the bell; and would find himself accommodated as rapidly and far more pleasantly than at present. To ladies this system would be a great boon: it is now no uncommon spectacle to see a female applicant for a cab or coach infested, and even insulted, by the several candidates—all alike anxious to secure the *fare*."

The improvement would be considerable in every way. Constant exposure to the weather produces frightful diseases in the drivers, fosters vicious habits of intemperance, makes them regardless of personal neatness, and altogether tends to keep the class degraded. Killing the horses, it makes the owners use worse animals. And turning the open streets into stable-yards, without the conveniences thereof, it violates every rule of decorum and sanatory law. It is curious how we moderns consent to keep up old barbarisms of an odious kind. We boast of our conveniences, but submit to the filthiest nuisances for want of a little energy of will. Streets are made for transit, not for stabling; private carriages and omnibuses must "move on;" any nobleman whose servants should use the streets as a coachhouse and stable-yard would have to answer for the offence in a police court: but a special license is accorded to the lowest class of vehicles to block up the streets with a squalid stabling.

The immense improvement that would ensue in the good order both of carriage and driver, if it were made possible by the aid of shelter, need scarcely be pointed out: hackney cabs would soon get to rival private broughams in their comfort and appearance.—*Spectator*.

Hydraulic Telegraph.—We lately inspected a new species of telegraph, produced from the action of water, patented by Mr. Jowett, which appears to us very simple and ingenious, and is likely to excite some attention, both from its own merits and from the interest which is taken in this means of communication at present. The idea of using water as a medium by which to communicate from place to place arose from its well-known incompressibility, and we find Mr. Jowett quoting, in his prospectus, from Dr. Lardner, the following passage, which conveys the leading feature of his invention:—

"A pressure excited on the liquid at one end of the tube will be communicated to any surface in contact with the liquid at the other end, whether the tube between the two extremities be straight, curved, or angular, or whether it pass upwards, downwards, or in an oblique or horizontal direction. It may be carried through the walls of a building, through the course of a river, under, over, or around any obstruction or impediment, or, in fact, according to any course or direction whatsoever. If a tube, filled with water, extended from London to York, a pressure excited on the liquid at the extremity in London would be instantaneously transmitted to the extremity at York." There is, perhaps, a limit to this doctrine, where curves and undulations are to be overcome, and also from the cohesive power of the particles of water to that with which they are in contact. The model now exhibiting consists of a small tube with a piston and indicator at each end. An upright plate contains the letters of the alphabet, the first letter being at the top of the plate at one station, and at the bottom of the plate at the other. Thus, if a telegraph of this description were laid down from London to York, the indicator, if pointing to the letter A, would be at the top of the plate at the former place, and at the bottom at the latter. As the one piston descends, the other, from the pressure of the water, ascends in exact proportion, each indicator pointing to the same letter. In the model, as we have stated, the plates containing the letters are placed upright; but it will be easily seen that a horizontal dial can also be used, by means of a rack upon the piston and toothed pinion to guide the indicating hand. This dial may contain two or more circles, into which contracted sentences on any number of subjects can be inserted, the indicator being shortened so as to meet each circle. If it were wanted to communicate any intelligence upon railways, as an example suppose the contracted sentences relating to this subject were in the inner circle, the first intimation would be to shorten the indicator, so that its point would exactly touch the words which are to be communicated. If a line of pipes were laid down from any given distance, each intermediate station would be communicated with by means of branch pipes. To each piston a bell is attached, and the first motion would sound this, putting every one on the *qui vive*. If the communication were intended for the first station, the bell would strike one, and so on for the others. Without passing any strong opinion as to the merits of this invention, we must say that its extreme simplicity struck us as an advantage of great importance. The difficulties which may at first sight strike the observer, such as getting over heights above the level of the stations, are what upon consideration it will be seen can be got over by local appliances. Perhaps the most serious would arise from the fact that the pipes will require to be placed underground so far as to keep them from atmospheric influence, for in the event of any breakage taking place, it would be difficult indeed to tell the precise locality of the accident. In the case of wires as used at present, any damage they may sustain is easily found out, and can be as easily remedied; but in the case of underground pipes filled with water, unless, indeed, this agent be in sufficient body to force itself to the surface, we do not see how an accident can occur without causing much labor and cost. The inventor claims for his plan over the present electric telegraph greater economy in construction to the extent of two thirds, *no* expense whatever after the first outlay, and the impossibility of any physical impediment interfering with its working. The plan, whether generally adopted or not, is certainly well worthy of attention, and no one can examine the model without being struck with the principle which it so beautifully illustrates.—*Post*.

The Turkish ambassador gave a grand soirée at which were present the principal members of the diplomatic corps, and amongst them Sir S. Canning and Count d'Appony. His excellency was particularly attentive to his guests, and above all to the female portion of the company, to whom he paid a number of Eastern compliments, in excellent French.—*Spect*.

General Flores.—This Spanish officer, whose name became so notorious from the contemplated expedition to the Equador, has arrived in London from Cuba.

The Republic of Liberia.—The existence of an independent republic of *free blacks* on the continent of Africa, comprising a population of 80,000 souls, including natives who have been incorporated into the colony, is one of the most remarkable phenomena of modern times. The above estimate of population is given by Gov. Roberts in his inaugural address, Jan. 3, 1848, and is no doubt essentially correct. In this growing colony, which now extends 300 miles along the coast, the English language is that which will ultimately prevail, and is already spoken to a great extent. The free colored men of the United States, and even their white Abolition brethren, after abusing the colony without mercy for many years, are beginning to look upon it with a considerable degree of favor, and will probably become in due time its fast friends. Why should they not? They profess to be the friends of the colored man—and the world does not afford another example so honorable to his character and so cheering to his hopes. They profess to abhor the slave trade, and this much abused colony has done more to repress that trade, than the combined navies of England, France and the United States. They profess (some of them) to love the religion of the Gospel, and this colony is doing more to spread that religion in its purity over the benighted regions of Africa, than all other human instrumentalities put together. Having become independent, it will for the present be less an object of jealousy to foreign powers. Being less dependent upon the Colonization Society than formerly, it will be less an object of jealousy to the enemies of that society at home and abroad. The practical wisdom of the colonization enterprise, and the far-reaching sagacity and benevolence of its founders, now begin to stand out in bold relief: and as that infant republic shall expand its frame, and extend its influence over the whole African continent, becoming alike the asylum and the glory of the free colored man, even Garrison, or his descendants, if any such there be, will be constrained to confess that hostility to African colonization, is hostility to the colored race.—*Journal of Commerce.*

Port Natal for the Cultivation of Cotton.—At a special meeting of the Board of Directors of the Chamber of Commerce held at Manchester on Thursday last, Mr. Blaine was introduced by the president. This gentleman, who has resided in the colony for four or five years, and taken a great deal of pains to make himself acquainted with its capabilities, &c., produced a variety of specimens of cotton grown there, some of them indigenous, and some cultivated from seed brought from America, China, the Mauritius, and other parts. All these specimens were approved by the very competent judges to whom they were submitted, and some of them were pronounced to be exceedingly fine and of the highest character. Mr. Blaine read a statement he had drawn up as to the general nature and features of the colony, the habits and disposition of the native population, which amounts to 100,000 persons, the capability of the harbor, the anchorage, &c. All these, according to his statement, were highly favorable for the cultivation and export of cotton. The chairman towards the conclusion of the proceedings said, that in all probability Mr. Blaine would put himself in communication with Lord Grey as to the desideratum of immigration to the colony, and begged, on the part of the directors, to thank him for his very interesting communications.—*Times.*

Gravitation of the Electric Fluid.—Mr. Lake, of the Royal Laboratory, Portsmouth, has communicated to the *Lancet* the results of a singular experiment, which appears to show that the electric agent is really fluid; and that when collected so as not to exert its powers of attraction and repulsion, it obeys the laws of gravitation like carbonic acid and other gases. The electric fluid was received in a Leyden jar insulated on a glass plate. At the lower part of the jar was a crack in the side, of a star-like form, and from around this the metallic coating was removed. On charging the jar, it was observed that the electric fluid soon began to flow out in a stream from the lower opening; and, on continuing the working of the machine, it flowed over the lip of the jar, descending in a faint luminous conical stream, (visible only in the dark,) until it reached the level of the outside coating, over which it became gradually diffused, forming, as it were, a frill, or collar. When the jar was a little inclined on one side, there was a perceptible difference in the time of its escape over the higher and lower part of the lip, from the latter of which it began to flow first. On discontinuing the working of the machine, the fluid first ceased to flow at the lip of the jar, and then at the lower aperture. On renewing the operation, it first reäppeared at the lower aperture, and afterwards at the mouth. This very ingenious experiment appears to establish the fact, that the electric fluid is material, and is influenced, under certain circumstances, by the laws of gravitation. Mr. Lake proposes for it the name of pyrogen; but this is inconvenient, because it is already applied to certain chemical products.—*Medical Gazette.*

A royal ordonnance, dated the 26th Feb., continues the prohibition of the exportation of potatoes up to the 31st of July next.

A letter from Rome of the 18th says:—"General Gabrielli, formerly an officer in the French army, has just been named by the pope minister of war. This nomination of a laic to a ministry has produced an excellent effect. It is the best commentary on the *motu proprio* relating to the organization of the council of ministers.

Mexico.—There are some important points in the following letter with which we have been fa-

vored from Mexico. That the Americans are willing to *occupy* the whole country we can well believe; but are they prepared to pay the necessary cost, or vote the establishment of the large standing army that would be necessary for the purpose? The project of Paredes, if he really entertains it, of erecting Mexico into a monarchy, and offering the throne to some European prince, would seem to afford a reasonable chance of yet preserving the country, or at least a fragment of it, and of checking the further progress of republican rapacity:—

MEXICO, Dec. 13, 1847.

The state of affairs in this country is not likely to offer any feature of interest for some time to come, and may be viewed as going through that ordeal which intervenes between the invasion of a country and its permanent occupation by the conqueror. Independent, republican Mexico is virtually no more; she may struggle on for awhile; she may defer, but she cannot avoid, her fate, which is, to fall under another ruler. Were overtures for a peace to be now made on the part of the Mexicans, it is a very doubtful question whether the Americans would not prove as fastidious and perverse as the Mexicans were when previous negotiations were going on. The Americans now occupy a very different position to what they did when they offered terms. They have been very considerably reinforced; and, although some opposition may be offered to the war policy at Washington, that policy, it is confidently anticipated, will find a majority in Congress. They have at present, therefore, neither to fear the enemy in their front nor censure at home. The Mexicans, beginning to understand this, are disposed to sue for peace, and it is believed a commission will shortly be named for this purpose at Queretaro, with full powers to negotiate a treaty, but time alone can tell what result will attend this proceeding. It is tolerably evident now that the Americans will only admit of such a boundary line as will admit of very easy access to these parts, should any future differences arise between the two states, and to the cession of the whole of Upper and Lower California. As regards the inhabitants of Mexico, their present position under the American dominion is quite enviable as compared with their previous existence, and the fruits of a well-ordered and stable government are beginning to become manifest in the revival of commerce and restoration of confidence. The commercial community and people possessing property cannot but view with fearful anticipations a return to the deplorable state in which they lived under Mexican government, and are by no means anxious to lose their invaders. I took occasion by the last mail to allude to a scheme entertained by Paredes of establishing a monarchy, and, if his notions are practicable, this country may have a chance (it is the only one) of averting for a time its impending doom, supposing a peace were for the present to be concluded with the Americans. From what I could gather, he proposes that some junior European prince be offered the crown, and that the right of succession should be with his heirs male—in fact, that a constitution embracing the three estates should be determined upon; that the latitude of electoral right should be restricted to such a body as, from their property and interests, would ensure a legitimate representation; and that such an army only as would be absolutely necessary for the public service, or which the government would afford to keep incorrupt, should be maintained. If we may judge from the past, we may safely conclude that the republican principle has totally failed in this country, and, indeed, in every country of the New World peopled by the Mauritanian race. We cannot help, therefore, leaning towards a monarchical form of government as one better fitted for these people. It is remarkable, in support of this view, that the Brazils is the only South American state which has, as an independent country, ever attained any degree of prosperity, and it is likewise the only monarchy. Mr. Percy Doyle, her majesty's minister plenipotentiary, has arrived in this city, much to the gratification of all who knew him when he was previously here. He is well fitted to watch over our interests during these turbulent times.—*Britannia.*

HANGING JUDGES.—Buller was said always to hang for sheep-stealing, avowing as a reason that he had several sheep stolen from his own flock. Heath, acting more on principle, used to hang in all capital cases, because he knew of no good secondary punishments. Said he, "If you imprison at home, the criminal is soon thrown upon you again, hardened in guilt. If you transport, you corrupt infant societies, and sow the seeds of atrocious crimes over the habitable globe. There is no regenerating of felons in this life, and for their own sake, as well as for the sake of society, I think it is better to hang." When sitting in the crown court at Gloucester, he asked a lying witness from what part of the country he came, and being answered, "From Bitton, my lord," he exclaimed, "You do seem to be of the Bitton breed, but I thought I had hanged the whole of that parish long ago."—*Lord Campbell's Chancellors.*

A NOBLE AND REFINED COMPLIMENT.—"I shall never," says Ledyard the traveller, in writing to Mr. Jefferson, the American statesman, from Egypt, "think my letter an indifferent one, when it contains the declaration of my gratitude and my affection for you; and this, notwithstanding you thought hard of me for being employed by an English association, which hurt me much while I was at Paris. You know your own heart; and if my suspicions are groundless, forgive them, since they proceed from the jealousy I have, not to lose the regard you have in times past been pleased to honor me with. You are not obliged to esteem me, but I am obliged to esteem you, or to take leave of my senses, and confront the opinions of the greatest and best characters I know. If I cannot, therefore, address myself to you as a man you regard, I must do it as one that regards you for your own sake, and for the sake of my country, which has set me the example."—*Life of Ledyard the Traveller.*

VOLTAIRE'S CHARACTER OF CROMWELL.—Cromwell is described as a man who was an imposter all his life. I can scarcely believe it. I conceive that he was at first an enthusiast, and that he afterwards made his fanaticism instrumental to his greatness. An ardent novice at twenty often becomes an accomplished rogue at forty. In the great game of human life, men begin with being dupes, and end in becoming knaves. A statesman engages as his almoner a monk, entirely made up of the details of his convent—devout, credulous, awkward, perfectly new to the world; he acquires information, polish, finesse, and supplants his master.—*Philosoph. Dictionary.*

EDITH KINNAIRD.—PART III., CHAP. VIII.

PHILIP EVERARD was not a man to be overcome by any circumstances in which he might be placed; his will, vigorous and disciplined, rose to the encounter with a strength which failed not to increase in proporton to the difficulties which opposed him. Yet, on the present occasion, his self-possession well-nigh forsook him, his eye sank, his voice trembled, and, for the first moment, strange as it may appear, Edith, in the very desperation of her enforced composure—Edith, the weak and unstable woman, was apparently the calmer of the two.

"There is some mistake, I think," said she, gently, in answer to his scarcely articulate salutation, and, but that her hand closed tightly on the back of the chair by which she stood, and her lips quivered a little, there was no outward sign of agitation. "You inquired for Miss Forde."

"I can scarcely hope to be forgiven for an intrusion which must seem so unwarrantable," replied he, hurriedly, "but my visit *was* to Miss Forde. Can I see her?"

"She is not at home."

"And you expect her—"

"Not for a fortnight, at least."

Quietly, though with a certain breathlessness, were these few every-day sentences exchanged; who would have dreamt that such a past lay hidden under such a present? But it is ever so; the lava destroys, the earthquake engulphs, and then the ground closes, and the humble village arises, and the very existence of the proud city beneath it is forgotten.

Everard hesitated for an instant, and then walked up to Edith with a mixture of reluctance and determination, his manner visibly changing, as if under the influence of irrepressible feeling. "Then Edith," said he—"Miss Kinnaird, I must needs speak to you myself. God strengthen us both. I beseech you to summon all your courage."

At the first note of tenderness in his voice all Edith's assumed self-command gave way, and she sank upon a chair, vainly laboring to conceal her tears. Everard continued to speak, and nothing but the exceeding and cautious gentleness of his manner betrayed that he had perceived her emotion.

"I wished to see Miss Forde," said he, "because I thought she would communicate what I have to tell better than I could do it myself. I know I must distress you greatly; God knows what it costs me to do so. I do not bring you good news."

He was evidently trying to prepare her for some terrible intelligence—the most painful task which ever falls to human love, and yet one which none but the truest love should execute. At first she had scarcely grasped his meaning, but now it suddenly flashed upon her.

"Tell me at once," cried she, starting up, and for the first time lifting her eyes to his face. "Frank?" she could say no more.

"He is alive, and there is hope," said Everard, quickly.

Edith neither screamed nor fainted, but she trembled from head to foot, and her white shivering lips tried in vain to shape the words with which she panted to question him. He understood her perfectly, and, without inflicting upon her all that well-meant torture of petty delays and useless restoratives so commonly employed in cases of sudden affliction, so needlessly oppressive to the sufferer, he proceeded to do the best thing he could, namely, to tell the truth, calmly, quickly, and sympathizingly.

"He has met with an accident," said he; "do not fancy that I am keeping anything from you; I am going to tell you the exact truth. There is hope that he may recover—with his youth and strength there must be considerable hope; but I must not conceal from you that he is in danger. It was a fall; he went too near the edge of a cliff and part of the earth gave way. I came myself, both because he wished it, and because I was sure you would desire to come to him directly, and I thought there might be some difficulty; I thought, too, it would be a satisfaction to you to be quite sure that you were hearing the exact truth."

"Thank you," said Edith, in a choking voice; "I may come directly?"

"As soon as you feel equal to it," he replied. "A carriage is waiting."

"Thank you," repeated Edith. She was half stunned; it was a strange, unreal, dreamy sensation; she could feel no conviction of the truth of what she had been told, still less could she persuade herself that Everard was in the room with her, and that she had learned it from his lips. She put her hand to her forehead, and looked up with a delirious inclination to laugh, and tell him that it was all nonsense, and she was not deceived.

Everard rang the bell for some water, and, holding the glass for Edith to drink, he very clearly and deliberately repeated his intelligence to the servant, adding an order that she would pack up her mistress' things as quickly as possible, and get ready to accompany her, as it would be necessary for them to set off almost immediately. He watched Edith's face while he spoke, but there was the same unnatural, incredulous expression in it, and a cold fear came into his heart, and made it pause in its beating as though a strong grasp had closed upon it. Then he took both her hands in his, and spoke with the utmost tenderness. "My dearest Edith, be comforted; trust in God. Exert yourself for Frank's sake—he is longing to see you—you must be his nurse and companion, but you know you will not be allowed to be with him if your own strength fails. I have known worse cases than this recover; and if not, Edith,"—he was afraid to encourage hope, for the surgeon's opinion had been very desponding—"will you not try to submit to God's will and to take comfort? will you not try to support yourself? I know how hard it is, almost impossible in the first moment—but, for Frank's sake."

The soothing words had their effect. The strange, wild expression passed away, and she bowed her face upon his hands, and wept like a child. When she looked up there were tears on his cheeks also. She rose hastily. "Now I am quite well," she said, "and quite ready. Do not let us waste a moment—pray let us go directly."

He judged wisely that it would be cruel to detain her, and went out to expedite arrangements for their departure. When he returned he found her bonneted and shawled; very pale, but quite composed; her hand shook as she accepted his arm to walk to the carriage, but she did not withdraw it, neither did she speak, and they crossed the hall together. At the door she paused, shuddering and sobbing—he looked anxiously at her. "The last time we were together," said she in a broken voice, "I vexed him."

Everard was too deeply moved to answer immediately, but in a few moments he said, gently, "Do not think of it. I am sure he has long forgotten it. He spoke of you with the fondest affection.'

"When?" cried Edith suddenly.

"The last time he named you," returned Everard, with a little hesitation—"yesterday, I think."

"Not since—" (she could not say "his accident." Why is a word so much harder than a thought!) "Not when you left him?"

"No," replied Everard, "he did not speak of you then."

Edith felt the import of the sentence, and, burying her face in her hands, suffered herself to be assisted into the carriage. Immediately afterwards, however, she put out her head, unable to abstain from asking the question, though she was almost certain of the answer, and said in a low, desponding tone of voice, "Will he not know me?"

"He may, very likely; indeed, I trust that he will. But, you know, temporary insensibility is the common result of an accident of this sort, even when it is not very serious, and I came away as soon as I learned that there was no immediate danger."

"How far?" inquired Edith.

"Twenty miles only."

And not another word passed between them. Silently Everard placed the maid in the carriage beside her mistress, directed the coachman to drive quickly, and, springing on a horse, which was in waiting for him, soon outstripped his fellow-traveller. Edith kept her face covered, and unclosed not her lips during the whole journey. Who shall tell what passed within her during that silence? First, there was tumult, and wild, unnatural thoughts struggling with hurried prayers and trying to drive them out of her heart; and despair, and unbelief, now in God's mercy, now in the reality of her affliction; demon-whispers that seemed prompting her to utter derisive words which it would have been madness to speak. And then the prayers conquered, and there was a strange sort of peace, like the hush in a chamber of death, and her spirit prostrated itself as if communing with the presence of an angel, and said almost without an effort, "Here am I; do with me as thou wilt!" and then came a quick burst of bitter tears, and a throng of sudden memories that hurried past her like phantoms in a dream, bright and smiling as they approached, but withering into pale corpses as she gazed upon them. And paler, sadder, than all, wringing, as it were, tears of blood from her heart, came self-reproach, the only unbearable pang in the dreary catalogue of human woes—the tormenter, which, like Eastern despots, not only impales its victim, but refuses him the cup of water which might assuage or shorten his anguish—the one agony that knows no consolation. Counsels neglected, unwary words resented, little faults unkindly judged, motives unfairly attributed; small injustices and forgotten wrongs, done in the wantonness of prosperous affection or the heedlessness of irritation, all started to life, and proclaimed that now they must needs live forever, since she could neither recall them nor atone for them. Oh, how sternly does the absence or suffering of the beloved teach love to remember its sins! Oh, how far more deeply and irremediably does an unkindness or an offence wound the heart of him who has inflicted, than of him who has suffered it!

And then, through all this pain and fear, and shame and sorrow, the words and the tone of Everard thrilled suddenly upon her memory like an echo of far music heard through the howlings of a tempest, or the momentary gleam of one pale star when darkness covers the skies. But she put away the thought, and well-nigh hated herself that she had harbored it for a moment. "It was only compassion," said she in her heart, "the pity of a cold but not unkind indifference." And she betook herself once more to prayer.

The carriage stopped. Everard was at the door to receive her, and spoke before she had time to question him. "He has been sensible; he has undergone the necessary operations; he is asleep."

"A good sign?" asked she, breathlessly.

"Yes—so far good," rejoined he, with unspeakable dread of encouraging too far her sanguine nature. He took her hand, and gently led her upstairs to a dressing-room adjoining the sick man's chamber; there were refreshments on the table, and of these, though little enough inclined, she partook; for the quiet authority of his manner made her a very child in his hands. Then they sat down, side by side, close to the open door, to wait for the waking of the sleeper.

No sound but the ticking of the clock on the mantelpiece, and the low note of its chimes as it told ever and anon that another quarter of an hour of life had passed away. It seemed the audible footstep of coming Death, and Edith clasped her hands upon her ears that she might not listen to it. No sight but the table visible through the doorway, with the phials and the strips of torn linen upon it, here and there spotted with blood, and the motionless curtain of the bed, and the composed but grave face of the surgeon, who sat beside it. Edith kept her straining eyes fixed upon that face till its quiet seemed stony and spectral to her, and she could look no longer, but turned away with an inexplicable terror. The still folds of the bed-curtains seemed to her to be endued with an unreal motion; she saw them tremble as with the breath of the sleeper; she imaged to herself the ghastly form which they concealed, with every possible feature of distress and horror; she expected to see them suddenly put aside; she felt as though she could not endure to look upon the spectacle which must then be revealed—as though the slightest movement of the drapery would shake her reason from its balance.

The chime again! She has watched three hours. Was it fancy, now, or was there indeed a movement in that fearful room! Yes, the surgeon rose, and, softly approaching the bed, put his head cautiously within the curtains. There was a low murmuring sound: the sleeper must have awakened. Edith was springing to the bedside, but Everard's firm but gentle grasp detained her; and he whispered, scarcely above his breath, "Remember, he does not know you are come; be patient a moment; he must not be startled." And then he supported her trembling form, tenderly as a child takes a wounded bird to its bosom, and their eyes met, and shrank not from each other's gaze; and, without a word, each knew that the love of the other's heart was stronger and purer even than it had been when they parted four years before.

Five minutes only!—but the matter of a lifetime was compressed into their brief silence. The surgeon leaves the bedside; Everard beckons to him; he comes into the outer room, carefully closing the door behind him; Edith looks not into his face, for she dares not, but she looks into Everard's, and there is a smile on his lips; and, dizzy and weeping, she gathers her failing senses to comprehend the blessed words, "There is every hope. I expect that he will recover,"—strives to fold her hands and bend her knees in thankfulness, and knows no more, for the revulsion has been too great, and she has fainted.

When she opened her eyes from that happy

swoon, she was lying on a sofa, with Everard kneeling beside her, her hand in his. And the first words he whispered were—what? An assurance of forgiveness? No. An entreaty for it. Oh! with what humble and self-condemning words did Edith answer him! How tearfully did she pour forth her confession and her penitence! How earnestly did she justify him—how sorrowfully reproach herself! Not that she had ceased to love him, as he indeed had thought, but that she had ceased to be worthy of his love. With the eloquence of few words and many tears, blending the shame of true repentance with the happiness of perfect reconciliation—finding no ease save in avowing and dwelling upon the wrongs which yet she cannot contemplate without the keenest pain—striving, as it were, so to outgo him in condemnation of them as to leave room for nothing but pardon in his heart. It is forgiveness which makes the sense of a fault everlasting, the memory of it indelible.

And had Everard no self-accusation on his part? Much, truly, and he was not slack to utter it. He had been harsh, impatient, unjust; he had learned by bitter self-inflicted dicipline the need (so he said) of that charity of temper, the deficiency of which was once rather a boast than a shame to him. He had learned that the love of good is better than the hatred of evil; that unconscious self-worship lies at the root of misanthropy; that bitterness against the sins of another generally accompanies blindness to our own. He did not think that he deserved the exquisite happiness of the present any better than Edith.

And so the Gardener found his Lily again, rooted in the bank whereon he had unthinkingly flung it; and the cankered blossom was severed by the fall, and the rich array of spotless buds had expanded in the spring sunshine, pleading to him with a thousand silent voices, and bidding him forsake his unlovely domain, and make a new garden for them to dwell in. And the plant of Love, being cherished and tended, bore its natural fruit, which is the beauty of life in this world, and the promise and foretaste of it for the next.

It is said that if a silken thread be tied around a perfectly moulded bell at the moment of sounding, the bell will burst asunder, and shiver into a thousand pieces. So is it when a heart of perfect and delicate harmony in itself seeks to manifest its life among other hearts; the slightest revulsion is enough to destroy the expression forever.

Let us draw aside, and keep silence, and watch quietly in the distance; we dare not *speak* of this joy. Let us be very silent, and listen heedfully to the inner chime of our own hearts, if it have power to make itself heard; happy indeed are we if it convey to us an echo caught from the great chorus of Love.

CHAPTER THE LAST.

Coming home is either the happiest or the most sorrowful thing in life, and the one ingredient on the presence or deficiency of which its character depends, is Love. If there be only Love in a home, let its other qualities be what you please, let it be full of faults, abundant in discomforts, pinched by poverty, and darkened by sorrow, still there is happiness in coming back to it—still there is no happiness, worthy of the name, conceivable away from it. It is the soul's native element, and out of it there is for her no healthy growth or free development—nothing better than a sickly hot-house life, brief and evanescent, or an untimely withering, a going down while it is yet day. But if the home be loveless, you may steep it in external sunshine till it glitters with radiance, yet it will ever strike a chill to the heart; unless you take refuge in making the heart loveless too, and for that labor you will need a giant's strength and a life's perseverance, and the end of it all will be—failure. You may make the surface callous, and you may continue the hardening process deeper and deeper inwards, but there comes a point where you must stop, humiliated at the impotence of your own will; for the celestial fire burns at the centre, and you cannot quench it, for it is immortal. Never was there a truer word than the poet's—

> "The deepest ice that ever froze,
> Can only o'er the surface close;
> The living stream lies quick below,
> And flows, and cannot cease to flow."

Fear and hope are the symbols of love; nay, they are the very manifestations of its presence—the very language of its thought: and if, having nought to lose, fear may be dead within you, still it is hard for you to slay the infant hope, who looks pleadingly into your face, and seems to promise that if you will only let it live the speechless eyes shall acquire a distincter eloquence, the feeble limbs a more conscious strength, and it shall be to you a counsellor and a comforter. "In hope," says Schlegel, "such as it at present is among men, lies the chief defect; for hope ought to be strong and heroic, otherwise it is not that which the name expresses." And where hope and fear are both dead, or have lain so long in torpor that their awakening seems impossible, there is yet another witness to the secret life of love, perhaps more convincing than either—namely, bitterness. Where the scorn is most loudly expressed, depend upon it, the need is most deeply felt. Who would be forever warding off blows, unless he felt that he should suffer from them? Who would proclaim defiance that did not fear defeat?

But what coming home was ever so happy as Aunt Peggy's, when, released from the bedside of her querulous brother, she was welcomed by Edith's sparkling eyes and warm embrace, and led to the sofa in the western window of that pleasant drawing-room, where Frank, pale, but fast regaining strength, received her somewhat more vociferously, and Everard's silent pressure of the hand seemed perhaps the warmest welcome of the three? Much had she to hear, and something to tell; tea was speedily disposed of, and the joyful group, reinforced by the addition of Mr. Verner, gathered around the invalid's couch, which was moved to his favorite position, where a flood of mellow light from the sinking sun poured in through the tender green of budding rose-trees which skirted the window, and framed, as it were, the garden-picture outside. The thick blossoms of an almond-tree spread themselves out in a pattern of delicate rose color against the vivid blue of the eastern sky; the horse-chestnuts exhibited their manifold clusters of white, heaven-pointing spires; the ground was redolent with the fragrance of lily-bells and bursting violets. Every tint was so light, so transparent, yet so intense, that the whole scene looked more like an illuminated picture in some splendid missal than a real corner of the visible world; against the glowing west, one almost expected to see in sharp relief the serene form and angel face of the maid-mother, with the wondrous babe cradled on her bosom. Night too, seemed coming onward with a half-play-

ful stealthiness, like one who should say to a child, "Only let me hide your eyes for a few minutes, and you shall see what fresh beauties I will make ready for you by the morning!" Edith felt Everard's hand clasp gently upon her own, and as she gazed forth in quiet perfect happiness, she could not but remember the autumn sunset which she had watched from the foot of the oak in Beechwood Park—she could not but think how cheaply the spring had been purchased by the intervening winter. Cheaply, indeed! Alas for those whose winter ends not! yet even for them there shall one day be a spring, when the heavens and the earth are made new, if only they keep their patience and their faith.

"And now tell me the news from Mrs. Dalton," said Aunt Peggy; "you said you had a long letter from her."

"I dare say," cried Frank; "she is just the sort of person to write half-a-dozen sheets at a time, crossed all over so as to make a multitude of little squares with an I at every corner. In the language of her own nonsensical philosophy, she is a capital specimen of the universal Me."

"My dear Frank, your hatred of poor Mrs. Dalton amounts to a real monomania. But this accusation of egotism is quite a new one—and about as correct as your quotation from her philosophy, as you call it."

"There are a great many different ways of being egotistical," grumbled Frank.

"Quite true, my dear fellow," said Everard, encouragingly. "Keep to those grand general observations, and you will be comparatively safe. I'll provide you with the practical instances—for example, one of the commonest forms of egotism is intolerance of all modes of thinking and feeling with which we don't exactly sympathize ourselves."

"I don't understand that," began Frank.

"I dare say not," remarked Everard, quietly.

"Oh! you shan't put me down in that manner," resumed Frank; "I know very well you were speaking sarcastically——"

"It is quite a comfort to your friends to find that you understood so much," interrupted Everard. "Suppose you meditate upon the rest, while we go on with our conversation, and tell us how far you have got an hour hence."

"I appeal to the company from this satirical gentleman," cried Frank—"I appeal to Mr. Verner. Is not sarcasm a form of egotism?"

"A very metaphysical question," said Mr. Verner, "but I think I may answer yes, inasmuch as it seems to imply a state of self-satisfaction, and contempt for others."

"I think it is about the worst form there is," said Frank, complacently.

"And I perfectly agree with you," rejoined Edith, "but you know what follows from that."

"What!" inquired he.

"That it is about the unkindest accusation which one friend could bring against another—in earnest."

"Oh! if Edith is going to take up your defence, Philip, I must surrender at discretion," exclaimed Frank. "The rebuke is quite sentimental, but it does n't touch *me*, you know, because I was n't in earnest."

"So people always say when they are proved wrong," observed Edith, demurely.

"People may, but I don't," said Frank, bluntly. "At any rate, I always confess my faults—that is to say, if you give me a little time to make sure of them. So now let us go back to Mrs. Dalton."

"I hate sarcasm in every shape," said Aunt Peggy, who had been not a little amused to observe the slight touch of earnest in this badinage; Everard having kindled because Edith's friend was attacked, and Edith because she thought Frank spoke sharply to Everard, yet both having so completely the air and tone of pleasantry, that it required a very delicate observer to detect the tiny edge of seriousness which had sharpened their wit.

"Yes, but you don't hate jokes, do you?" said Everard; "and in friendship, you know, (taking it for granted that there is such a thing,) apparent sarcasms must always be either jokes or mistakes."

"True," replied Frank, "unless one of the friends is in a passion with the other, which will sometimes happen, you know."

"Oh, then I don't call them sarcasms at all," interposed Edith; "the man who utters them does not at the time see their real meaning, and is the first to disown it when the anger is past. Anger, or irritated feeling, you know, makes one very often use words the true sense of which we should indignantly disclaim; and perhaps we are slow to confess it, only because we are slow to perceive it, never having really intended it."

"And so," said Mr. Verner, interrogatively, "you would excuse every kind of injustice on the plea that it was done in anger and unconsciously?"

"Not excuse it," cried Edith; "oh, no! condemn it, deplore it, repent it, whenever I think of it—only entreating that it should not be supposed to be the habit of my mind, and that therefore I should not be hardly judged in future because of it. Yet even such hard judgment, I suppose, is only a fitting punishment, and should therefore be taken meekly."

"Yes," said Mr. Verner; "we are not, I think, the best judges of the measure of severity which our own faults deserve."

"And now for Mrs. Dalton," said Aunt Peggy.

"First, let me tell her wonderful piece of news," replied Edith, blushing in spite of herself. "Mr. Thornton is going to be married!"

"Mr. Thornton!" said Everard and Frank in a breath.

"Yes," continued Edith. "Now please listen quietly, for it is very wonderful, and I scarcely think you will believe it. He is going to be married to Alice Brown."

"What a triumph for simple goodness!" exclaimed Aunt Peggy.

"I am most excessively sorry to hear it," observed Frank, whose opinions, or rather feelings, were as invincible as they were hearty and genuine. "She is not very attractive, to be sure, but she is a gentle, good girl, and is worthy of a better lot than being tied for life to a heartless dandy."

"Let me speak a word for him," said Mr. Verner. "He has many noble qualities, though circumstances, and a deplorable feebleness of will, have hitherto combined to keep them in the background. But I have every hope for his future. I saw symptoms in him when I was last with him, of the uprising of another spirit than that which has hitherto ruled his life; and perhaps no better proof of it could be given than his present choice—as most certainly he could have found no surer safeguard against a relapse. As for her, I am almost afraid to say how highly I think of her; she is eminently what a woman should ever be—the companion and the consoler."

"Well, I am glad to hear you say so much,'

replied Frank. "Perhaps I did him injustice. I always classed him with *that* Mrs. Dalton."

"Perhaps," observed Mr. Verner, quietly, "you did her injustice too."

Edith felt that keen and painful shyness so natural to one who sees that allusion is being made to a matter, the secret of which *she* knows, while the person most intimately concerned is ignorant that she knows it. Hurriedly and awkwardly she changed the topic.

"The Daltons are going abroad," said she, "they are quite tired of Beechwood, and they mean to spend the summer in travelling, and to winter at Rome. But, dear Aunt Peggy, I want to ask about *your* piece of news. You wrote me word that Mr. Owen Forde was engaged to Mrs. Alvanley."

Aunt Peggy's color rose, and she looked exceedingly blank. "It was a mistake, my dear," said she.

There was a somewhat awkward pause, which the good lady herself broke by adding, "Since I have been so extremely foolish, it is useless to try to make a mystery of it, but I am sure I need not ask you all to consider this as said strictly in confidence—for of course it would overwhelm Owen with annoyance if he knew that I had told you. The fact is, I ought to have said nothing at all about it; but he mentioned it to me in so confident and decided a tone, that I thought it was all settled, but it turned out afterwards that he had only sent the offer—and—and——"

"It was refused," said Captain Everard, looking as though he repented the words the moment they had passed his lips, yet uttering them in a tone of considerable satisfaction.

"Yes," replied Aunt Peggy, in a very downcast manner.

"Mrs. Alvanley has gone to London, I think," said Mr. Verner.

"Yes," answered Aunt Peggy, "she has taken a house in Belgrave Square for the season, and afterwards I believe she is going to the Rhine."

"A very pleasant programme," remarked Frank, yawning, "but I thought the good lady's means were so small that it was all she could do to live with comfort, and dress with fashionable decency."

"She had fifty thousand pounds left her the other day," said Everard, laconically. Frank elongated his face, and drew his lips together with a very significant expression. Delicacy towards Aunt Peggy prevented him from saying a word, but he could not help congratulating himself inwardly on the poetical justice executed upon Mr. Owen Forde. He had offered to fifty thousand pounds, on the strength of his own fascinations—and been rejected.

"And now," said Aunt Peggy, with a little malice, "there is another question which I want to ask, and I am not quite sure to which of this illustrious company I ought to address it; so I will ask it generally, and let him answer who can. Who is Miss Bracebridge?"

"I will undertake to satisfy you on that point," cried Everard, with the utmost alacrity.

"Indeed, you shall do no such thing," interrupted Frank; "don't listen to a word he says. I know of old his faculty for so dressing up a story that the very hero of it can't recognize it. I won't trust my character in his hands."

"*Your* character!" repeated Aunt Peggy; "I did n't know *you* were particularly interested in the matter."

"Let him go on," said Everard, throwing himself back in his chair; "he will exhibit himself far more effectually than I could. Give him plenty of rope—I would n't interfere with him for the world."

"Well," responded Aunt Peggy, "I will apply to him, then; Captain Kinnaird, may I entreat you to afford me a little information concerning Miss Bracebridge?"

"Oh yes, certainly," said Frank; "Miss Bracebridge is—that is to say, I don't know that there is anything very particular to be said about her. I suppose she would generally be considered pretty."

His manner was so elaborately terse and dignified, and so uncontrollably embarrassed, that the rest of the party could not resist joining in the laugh which Everard timed. Frank looked very good-humored, but a little really vexed, which his friend perceiving instantly changed the subject. He afterwards imparted to Aunt Peggy the true explanation of the mystery; namely, that Frank having been himself desperately enamored of the pretty Miss Bracebridge, and not receiving as much encouragement as he desired, had been violently jealous of Everard, and had taken refuge in a sort of haughty misanthropic theory, that he was not to be happy in this world, but that all his friends were to enjoy themselves at his expense. This idea, not being very congenial to his nature, had been dismissed as soon as he found how matters really stood with Everard, and it did not appear impossible that he might return and prosecute his suit hereafter, with some hopes of success. Everard's intimacy with the young lady had been simply that easy and pleasant communion which the public is apt to mistake for a flirtation, but which is, in fact, a much better thing, and is sometimes an introduction to one of the highest of earthly goods—a vestibule, as it were, to the sanctuary of Friendship. But it seems to require a faith greater than that which is able to remove mountains to induce people to believe, that there can really exist such a phenomenon as a friendship between man and woman. It is not very common, perhaps, to meet with a true friendship at all; for human nature is often changeable, often heedless, often unreasonable, and there are a thousand fine and tender links, the snapping of any one whereof may indefinitely retard the final formation of the chain; but nevertheless there *is* such a thing, and it is well to note it where we find it, if only by way of exception to general rules—by way of contradiction to the popular belief, according to which the fairest beginning is only the prelude to indifference or disappointment. The question, of course, is really whether the true germ be in both hearts, or not; if it be there, it must needs grow up and bear fruit, in spite of all possible disadvantages of sun and shade, rain and drought; but if we have mistaken another plant for the heavenly seed, we must bear to see it perish before the first unkindly blast. Fancy, convenience, community of pursuit, may deceive us for awhile, but these have no root; they are the annuals of the spirit, and fade after a single season's growth. Woe, then, to him who has mistaken them in another for that which they are not!

Everard and Edith walked together that night in the shrubbery. There is no record of their conversation, but, as they returned to the house, they paused and looked back together upon the moonlit garden, as Edith had before done in her desolation and remorse. She looked up now in his face. "Is it possible," said she, "that happiness can harden

the heart? I could not think harshly of any human being at this moment. My heart seems like a garden, so full of sunshine, that the tiniest flower, the meanest blade of grass, has somewhat of glory and beauty—thanks be to my sun for shining on them!"

"And the dreary cold of the past has prepared the soil for bearing this sweet harvest," returned he.

Then there was silence between them. There is no expression for perfect happiness but perfect silence. It is not human enough for language; and the fullest concord of harmonious sounds is, after all, *only* a sigh after *the Infinite*. No sound in the whole catalogue of earthly notes expresses unmixed joy but the laughter of a very young child, and we all know how that changes to tears in a moment. Yet if speech and sound are but the voice of longing, so after all is silence, rightly understood, only the voice of waiting. When will that Future come wherein the Present shall satisfy the soul?

"My poor Amy! Will she ever be—not as happy as I am, but happy in any sense?" murmured Edith, as she laid her head on the pillow, for a night of joyful dreams, and yet more joyful wakening.

Gentle public, we leave you to answer this question. And according to your answer shall we judge whether or not you have appreciated the Moral of this story. For it has a moral, we do assure you, sage school-masters and philosophers, and may, on the whole, be not inaptly named a "book of instruction." This fact will, of course, be held to excuse it for dulness. In conclusion—for the tale is ended—we would humbly entreat you to believe, that Mr. Verner was in reality a very delightful personage—in fact, an Ideal Man—we have contrived to present him to you on paper in the aspect, we are somewhat afraid, of a very oppressive *prig;* but we pray you to believe that the fault is ours, not his, and has arisen out of a species of that human deficiency to which allusion has so recently been made, which renders the expression of perfection of any kind well-nigh impossible. Should you agree with us, we can only say we are sorry that we attempted it; and so we wish you a long farewell, for Aunt Peggy is about to betake herself to a retirement, which perhaps she might deem herself wiser if she had never left.

Reputations Furnished.—The following advertisement is copied literally from the *Times*.

LITERARY ASSISTANCE.—Strictly Confidential.—A quarterly reviewer, classical scholar, and political writer of considerable experience, whose successful productions in various departments of literature have elicited from the "Athenæum," "The Times," "Quarterly," and numerous other reviews and periodicals, testimonials, which will furnish incontestable evidence of his high standing and competence to the task, ENGAGES TO ENHANCE OR TO CREATE THE REPUTATION OF AUTHORS or diffident aspirants IN ANY BRANCH OF THE BELLES LETTRES. POEMS, SATIRES, ESSAYS, LECTURES, SPEECHES, PREFACES, PROSPECTUSES, LEADING ARTICLES, SERMONS, or ROMANCES of sterling value, composed and transferred for an adequate remuneration. Works prepared for the press. Manuscripts critically corrected. Inviolable secrecy.

[This must be a wonderful genius; but, strange to say, his gifts do not avail him for himself, and he can create any reputation but his own, or why this tender of services so much beneath one who must combine the genius and accomplishments of a Scott, a Byron, a Junius, a Sterne, an Addison, and a Johnson? The collocation of performances is curiously happy; next to sermons being placed romances of sterling merit. The modest author dares not promise as much for his sermons. The advertisement is not properly headed; it should be "A CRICHTON TO LET."]—*Examiner*.

Cicero's Publisher.—He employed the whole body of his slaves in writing. In his workshop, which excelled everything that there had hitherto been in establishments of the kind, there were collected, as in our modern printing-offices, all sorts of workmen, part of whom were engaged in preparing the paper, and other materials, and repairing the instruments; part in multiplying the copies, and in correcting; part in skilfully rolling up the finished books, and completing them with covers, titles, and the other customary ornaments. Atticus, in like manner, established a bookshop, such as at this time of day could be found nowhere in the world, connected with any bookseller's or stationer's establishment. Cicero published most of his works with him, as, for instance, the "Quæstiones Academicæ," the "Orator," his "Letters," his "Speeches against Antony and for Ligarius." The last, according to Cicero's own expression, "sold so capitally," that he declared his intention that for the future everything he should write, Atticus should have to publish. We have here again clearly another example of the very great size of the editions. For Cicero, in this speech, had introduced, by mistake, a person long ago deceased as still living, and commissioned Atticus, after the book had already found a good sale, to have the mistake subsequently corrected by the erasure of the name in *all* the copies, that is obviously in those which were still unsold. But now how great must have been the remaining stock of copies, notwithstanding the large edition which had already been disposed of, when no fewer than three of the most skilful copyists were appointed to correct this one mistake! These, however, within three days, could certainly rectify at least a thousand copies! That Atticus, moreover, was not only concerned in the multiplication, but also in the sale of works—that his pursuit was not simply a hobby, but an actual business—this is clear from the extraordinary sale of the Ligarian speech. We even find Cicero himself in the number of his customers. He purchased from him a copy of the Serapion.—*Schmidt's Freedom of Thought and Faith.*

Newspapers can be legally lent on Hire.—In the case of "Miller *vs.* Champion," it has lately been decided by Mr. Dubois, at the Bloomsbury County Court, that newspapers could not be lent on hire. This decision, we learn from a competent legal authority, is erroneous. There is no law against lending newspapers for hire. There was formerly an act (29 Geo. III., c. 50, 1798) which prohibited it under a penalty of 5*l*., but that act was repealed by the present Newspaper Act, 5 and 6 Will. IV., c. 76, and the provision has not been reënacted. Indeed, for many years previously to the repeal the enactment had, so far as the Stamp-office was concerned, become a dead letter, it having been ascertained that the practice of letting out newspapers tended to promote the sale of them.—*Daily News*.

CORRESPONDENCE OF THE LIVING AGE.

Paragraphs from Paris—10 Feb., 1843.

We have seen the river Seine ribbed with thick ice, and in three days afterwards without a particle of it; so little durable is any *extreme* of weather in this meridian. The middle and southern divisions of France have been inundated with snow, and experienced on the whole a much severer season. Our atmosphere is now mild, yet gloomy. The sun is rarely visible, and the lengthening of the days hardly perceptible. Funerals abound in every quarter; *la grippe* continues to be fatal to the old and decrepit, though the victims are far less numerous proportionably than in London.

The chamber of deputies have already expended a fortnight in the debates on the reply to the king's speech, which embrace all the main topics of foreign and domestic policy. It is not probable that the hubbub will be concluded before the end of the week. Much instruction concerning the condition of the country, and the situation and aims of parties, is to be found in the mass of the prepared speeches. No change ensues in the doctrines or action of the government, or the general dispositions and views of the country. The struggle is mainly between M. Guizot and M. Thiers, and this being regarded commonly as a mere competition for power, makes an impression that does not threaten the peace at home, so important for the national progress. There is a sort of *entente cordiale* between the leader of the French opposition and Lord Palmerston: British measures and policy are therefore extolled by contrast. Several of the orators of the *centre gauche* chime with M. Thiers on this head; but the French in general deem Lord Palmerston an inveterate enemy, and have no confidence in British professions of good will. Repugnance could be distinguished in the faces of the chamber, on most of the benches, when M. Thiers spoke of "noble and independent England." The London Times of the 7th inst. rewards him by saying: "In spite of the moderation of the tone of M. Thiers there is that in the stamp and purpose of his mind which identifies him and his party with the enemies of the tranquillity and the permanent interests of Europe."

In one of M. Guizot's replies to the opposition, last week, a prominent member of the left cried out, "Speak in your own name, not that of France." The premier answered, "I do speak in my own name; be assured that I shall never speak in *yours*." Replication: "Truly I hope not." M. Thiers to an interrogator: "Don't be so *furious* in your questions, but listen to me." Retort: "I am not more furious than you were just now in the tribune."

The government suffered some sixty and more banquets, in the interior, to agitate for electoral reform. Last month, it was proposed to hold a kindred banquet in the 12th district of Paris; all arrangements were concerted, and the day and invitations settled. Suddenly advices came from the department of the interior and the prefect of police that no such meeting could take place. The ministry had found a law of interdict, of 1790, which might be applied to the project. Prodigious clamor followed; the committee of the festival issued a card, in the journals, declaring that being in a lawful and already tolerated course, they would inflexibly persist. In the afternoon of the 8th inst. this topic emerged in the hot debate. Duvergier, a man of authority in the opposition, exclaimed that all the invited deputies—some sixty or seventy—would attend the banquet, in order to try the question whether Frenchmen were subject to the arbitrary will of the cabinet. His colleagues confirmed this engagement by a chorus. Duchatel, minister of the interior, said, "The government will not yield." The scene thereupon is pretty accurately described thus:—Indignation throughout the left; protests—murmurs—cries of surprise and wrath; the tempest redoubled when the minister repeated vehemently, "The government will not yield." The whole opposition in tumult—several voices at the highest pitch, "Those are the very words of Charles X.; —there is blood in those words." Immense noise; extreme agitation; order! order!—"But let us exhale our patriotic rage." M. Lesseps, apostrophizing the minister, "You play the game of provocation." Answer: "The government does not mean to provoke any one." Another cry: "You have never done anything else." The president of the chamber calls M. Lesseps to order; the deputy vociferated, "That may do; you shall be, yourself, set to rights by the people."

At the end of Lamartine's eloquent harangue about Italy, the sitting was suspended some twenty-five minutes, so lively was the sensation. Among his statements were these:—The most exalted, the most enlightened, the most illustrious in name and descent, of the whole peninsula—over the whole, clergy and all—were at the head of the reform-movement. The Italian race had done as much to consecrate their soil as ever race did in human annals; France should connect herself by principles and conterminous alliances in a way to be prepared for the gravitation of the Russian power and despotism on the middle of Europe. This indispensable precaution, however, the ministry sacrificed to dynastic interests; the Spanish match was the bane of true French state-wisdom. This assertion would not stand a fair discussion. It is rendered more plausible, indeed, by the barrenness of Queen Isabel, and the precariousness of her life. Most of the Spanish politicians at Madrid—the majority of the nation we may suppose—would second the French court in supporting the claims of the Duchess of Montpensier. For this end—it is argued by the French opposition—the French government now truckles to Austria, in order to prevent a league of Metternich with Lord Palmerston for the exclusion of the duchess. On the 29th ult., M. Guizot assured the chamber of deputies that if France undertook to assist the Italians to drive Austria from Lombardy she would have to encounter another coalition of Austria,

Prussia, Russia, and Great Britain—all being resolved to keep things on the basis of the treaties of 1815.

La Presse, a journal that represents itself as in opposition, though not of *the* opposition, boasts of issuing sixteen thousand copies every morning, printing six thousand per hour. The subscription is only forty francs, or eight dollars, per annum, and it is as well supplied, as ably edited, as any other of the daily journals. The principal editor has a seat in the chamber of deputies. He lacks character, but retains influence and high associations by means of the journal—by dauntless assurance and indefatigable exertion. It is he, Girardin, who killed in a duel *Armand Carrel*, the great republican editor and oracle, and who has accepted twenty challenges since.

One of the commercial delegates, Haussman, who accompanied the French embassy to China, has published three interesting volumes, entitled a visit to China, Cochin China, and Malaisia, in 1844–5 and 6.

The sitting of the deputies (yesterday afternoon, 9th Feb.) was one of the most disorderly, violent and obstreperous known since the era of the National Convention. The morning papers report it with this general description: "The voice of M. Barrot, heard above all others, crying to the ministry, '*You transcend Polignac and Peyronnet.*' These names were the signal of a grand *mêlée*. The immense bugle of the centre sounded a most formidable yell. The entire left answered by the fiercest uproar: then nothing could be distinguished in the universal clatter of defiance hurled and retorted—stamping, extended arms with hands clenched, flourishes of fists in the air, every one on tiptoe—fiery eyes—the confusion and clamor being everywhere—the chair in dismay, and trying in vain, by perpetual ringing of the bell and calls to order, to regain some authority." The keeper of the seals was the chief object of the onslaught of the opposition. The president of the chamber, at 6 o'clock, pronounced the discussion ended, and rushed from his seat, and the deputies, bellowing after him, "separated in extreme agitation." If the opposition persists in holding the banquet which the ministry and police prohibit, and the authorities stand firm to their assurances in the chamber, there may be a dangerous public conflict, of which the issue will depend on the fidelity of the troops.

Three of the opulent American residents of Paris have given recently large balls—Mr. Ridgway of Philadelphia, Mr. Vanzandt and Mr. Legueur of New York. These entertainments have not been surpassed this winter in brilliancy and luxury. The fashionable French take an interest of curiosity in them; the British gentry, whole and half, rejoice in the suppers, and amuse themselves, the next day, at the expense of their host. What of the Yankees! &c. &c.

In the south, the large city of Toulouse, indeed, all the adjacent country, is now engrossed by a criminal case as exciting and atrocious as any single one in the French judicial annals. A young girl, of a very interesting character, was found violated and murdered with the most horrible circumstances near to the great edifice of an important religious order—the Brothers of Christian Doctrine. A member of this community has been arraigned upon strong and very peculiar presumptive evidence. A deep, wide-spread concern is felt by all the clergy and the devout laity. Toulouse is filled with strangers, from a considerable distance; most of the Paris journals have sent down reporters, and interminable narratives, including the long bill of indictment, are already published.

A gentleman who passed some forty minutes, the 9th inst., in conversation with the astronomer *Le Verrier*, portrays him in these terms. "The stature of this wonderful calculator is about five feet seven; his frame is robust and well turned: his complexion very fair; his hair sandy; his bluish eye exceedingly bright and vivacious; his elocution rapid, clear, and indicative of a gay spirit. He reads and writes English well enough for his purpose; he neither speaks it nor understands it sufficiently when spoken. He manifests a keen desire for the progress of astronomy in the United States, and would bestow a portion of time and study, not easily spared, for the purpose of advancing and commemorating American studies and discoveries. There is a striking contrast between his appearance and that of the illustrious Arago, of whom he has become in a manner the rival and antagonist. The latter has a dark skin, a large, wild black eye—an air of habitual command; he is taller and considerably older, fond of pleasantry, more or less sarcastic on every occasion."

The announcement of Marshal Bugeaud as minister of war is daily expected, though the present minister has not intimated an intention to resign. He possesses all the essential qualifications for the post. He is to be deemed the real conqueror of Algeria; yet he is not at all *popular;* he has not been half as much distinguished at home, in any way, as any one of the American superior officers have been everywhere with you on their return from Mexico. His manners are simple—rather blunt; he is inclined to jesting or waggery; he is tall, well-limbed, sinewy; his complexion light, his head quite grey—white; his face good, but not remarkably intelligent. He can talk most attractively, in the most familiar style, at the royal and ministerial dinners. Among the few good speeches delivered since the commencement of the session, in the chamber of deputies, are those of Marshal Bugeaud and General Lamoricière on the surrender of Abd-el-Kader and the future administration of Algeria. It was at first anticipated that, the emir being removed, the French forces and the annual expenditure in Algeria might be reduced a moiety—that is to fifty thousand men and fifty millions of francs. But the marshal argued that a material retrenchment could not be attempted for a considerable time; the Arabs were *four* millions; reluctant subjects; now condemned to new and hateful modes of life; to be perpetually watched and distrusted. Military colonization alone would suit the case; the first care of the settler was and

would long be—to keep his head on his shoulders. There might be a large saving in the cost of the present civil administration; and Bugeaud related instances of enormous jobbing and other abuse. General Lamoricière made an impressive recital of the circumstances and considerations by which he and the Duke d'Aumale were induced to assent to Abd-el-Kader's terms. He believed it practicable for the emir to escape with a few horsemen, to the desert; he thought that this alternative was far the worst for French interests: his responsibility was covered by that of the governor-general, the young duke for whom the ministry were liable. M. Guizot announced that he would send Abd-el-Kader to Alexandria, *provided* securities could be obtained against his return to Algeria.

In the most recent case of scandal in high life, in Paris, that of Count Mortier, lately minister plenipotentiary in Sardinia, and some years ago in Switzerland, we are approaching to a conclusion after shocking discussions before the courts. A committee of examining physicians have reported, in curious detail, that the count is partially insane, and must be indefinitely confined to a *maison de santé*. He was subject to an irascibility and to jealous hallucinations, which rendered him really dangerous to his family. The relatives of the countess have attested the infliction of brutalities on this lady, for a series of years, which render the contrast between her social exterior and domestic lot, like that of the butchered Duchess of Praslin. The fate of poor Count Bresson is nearly forgotten. Before his departure for Naples, he paid several visits to the American consul—an old acquaintance. In their last conversation, he manifested extreme sensibility to the atrocious charges heaped upon him, when he was at Madrid, in the London Times and the Chronicle. Rising suddenly, he exclaimed, with intense emotion, "Sir, those Madrid correspondents of the London press are the greatest *scoundrels* and *blackguards* in this world." Immediately, on his departure, the consul remarked, to a person in the next room, that there was an extraordinary and wild vehemence, and bitter resentment, on this topic, which surprised him in a practised diplomatist. The Times has malignantly suggested that the suicide of Bresson was owing to *remorse* for his agency at Madrid. It might be more plausibly ascribed to heinous calumnies of the *scoundrels* and *blackguards*. Two or three weeks ago, the Times more than hinted that Queen Christina was employed at Madrid in studiously abridging the life of her daughter, Isabel, in order to open the throne to the Duchess and Duke of Montpensier, conformably to the plans of the French court. In the last number of the Edinburgh Review, Louis Philippe is styled the wily *spider* of the Tuileries. The London *Spectator* has the following compliment to the Emerald Isle: "The grand resource of an Irishman in difficulties is *murder;* the form varies, but the *principle* is *universal.*" The same London oracle, explaining the unfortunate dispute of the American commanders in Mexico, says, that General Worth offended General Scott by criticising the capitulation at Puebla. *La Presse*, of the 8th inst., tells its readers that General Cass has just been elected "president of the legislature of Ohio, by 237 votes against 22," and "can count upon the decided support of nearly all the Western States"—and that in the senate at Washington, the executive was vigorously attacked by Mr. Johnson of Maryland, and defended with not less warmth by Mr. *Crittenden.*

Among the sights of last week was a grand procession of between two and three thousand students of the law and medical schools on the left bank of the Seine. Their purpose was to deliver a petition to the chamber of deputies, asking the restoration of the historian Michelet to his chair in the college of France, his hall having been closed by the minister of public instruction on account, ostensibly, of some very indecent proceedings by a crowd of his disciples with the speech of His Majesty, Louis Philippe. The main cause of the minister's measure (a little arbitrary) was the radical and infidel strain and purport of the lectures. When the procession arrived near to the palace of the deputies, it was encountered by a strong body of the municipal guards, and found itself flanked by a squadron of cavalry, and in the midst of a host of police agents. A parley ensued; a committee was let pass to meet a deputy, a Jew lawyer, who undertook to place the petition on the desk of the secretaries. The patriotic youth, most of whom had truly rugged miens and strange costumes, wheeled about and dispersed to three offices, successively, of radical journals, to be harangued by the editors. Seven or eight hours were consumed, and seven or eight miles traversed, in this rather ludicrous affair.

Rear-Admiral Ussher, whose death, after a very short illness, we noticed last week, was in the sixty-ninth year of his age. He was an Irishman, and a descendant of the celebrated Archbishop Ussher, and had seen a great deal of service. Amongst other duties, it fell to his lot to convey Napoleon to Elba. He was nominated commander-in-chief of the Irish station in June, 1847, and succeeded Sir Hugh Pigott to the command at Cove. He was further promoted to the rank of Rear-Admiral of the White just previous to his death.

Old Rice.—A gentleman who has resided for many years in India, fourteen hundred miles up the Ganges, says that the people there who are able to keep their rice, do not eat it until it is two years old, and the soft part has been eat out by the worm. Then they winnow it clean, and eat it. Rice is the common food, and the poor people are obliged to eat new rice, as rich people do here. This gentleman says that during his residence in India, there have been famines in the districts around him, in which "millions of people perished." The famines result from the entire absence of rain for six months, and scorching winds, which destroy all vegetation. The British government are building a canal of great capacity, from the mountains in which the Ganges rises, down into the country seven hundred miles, at an expense of fifty millions of dollars, for the purpose of irrigating the land. The cost of the canal is to be paid from the revenues of India.—*Journal of Commerce.*

CONTENTS OF No. 202.

1. Sir John Herschell's Astronomical Observations, *North British Review*, - - 577
2. Politics of the World.—Seizing Cuba, 597; Ireland, 598; Sicily and Italy, 600; Switzerland and Poland, 602; M. Thiers, 603; Wurtemberg, Jews in Europe, Cheap Postage, 604; M. Guizot, 605; Illegitimate Children, Abd el Kader, 606; Liberia, 609; Mexico, 609.
3. Foreign Miscellany.—Suspension of French Steamers; Coal in Oregon; Gen. Paixhans; Silesia; Earthquake; Boring for Water in Venice; Wolves in France; Communists from France to Texas; Expedition in Search of Sir J. Franklin; English Agriculture; Temperance; Chloroform; Great Railway Tubes; Cab Stand Nuisance; Hydraulic Telegraph; Turkish Soiree in Paris; Gen. Flores; Cotton at Port Natal; Gravitation of the Electric Fluid, - - - - - - - - - - - 606
4. The Maiden Aunt, - - - - - - - - - - - - - 611
5. Foreign Correspondence, - - - - - - *Living Age*, - - - - 617

Poetry.—Ode to Sicily, By W. S. Landor, 601.

Short Articles.—Auricular Confession; Tennyson's Princess; Maid-of-all-work, 596.—Hanging Judges; Ledyard to Jefferson; Voltaire on Cromwell, 610.

Prospectus.—This work is conducted in the spirit of Littell's Museum of Foreign Literature, (which was favorably received by the public for twenty years,) but as it is twice as large, and appears so often, we not only give spirit and freshness to it by many things which were excluded by a month's delay, but while thus extending our scope and gathering a greater and more attractive variety, are able so to increase the solid and substantial part of our literary, historical, and political harvest, as fully to satisfy the wants of the American reader.

The elaborate and stately Essays of the *Edinburgh*, *Quarterly*, and other Reviews; and *Blackwood's* noble criticisms on Poetry, his keen political Commentaries, highly wrought Tales, and vivid descriptions of rural and mountain Scenery; and the contributions to Literature, History, and Common Life, by the sagacious *Spectator*, the sparkling *Examiner*, the judicious *Athenæum*, the busy and industrious *Literary Gazette*, the sensible and comprehensive *Britannia*, the sober and respectable *Christian Observer*; these are intermixed with the Military and Naval reminiscences of the *United Service*, and with the best articles of the *Dublin University*, *New Monthly*, *Fraser's*, *Tait's*, *Ainsworth's*, *Hood's*, and *Sporting Magazines*, and of *Chambers'* admirable *Journal*. We do not consider it beneath our dignity to borrow wit and wisdom from *Punch*; and, when we think it good enough, make use of the thunder of *The Times*. We shall increase our variety by importations from the continent of Europe, and from the new growth of the British colonies.

The steamship has brought Europe, Asia, and Africa, into our neighborhood; and will greatly multiply our connections, as Merchants, Travellers, and Politicians, with all parts of the world; so that much more than ever it now becomes every intelligent American to be informed of the condition and changes of foreign countries. And this not only because of their nearer connection with ourselves, but because the nations seem to be hastening, through a rapid process of change, to some new state of things, which the merely political prophet cannot compute or foresee.

Geographical Discoveries, the progress of Colonization, (which is extending over the whole world,) and Voyages and Travels, will be favorite matter for our selections; and, in general, we shall systematically and very fully acquaint our readers with the great department of Foreign affairs, without entirely neglecting our own.

While we aspire to make the *Living Age* desirable to all who wish to keep themselves informed of the rapid progress of *the movement*—to Statesmen, Divines, Lawyers, and Physicians—to men of business and men of leisure—it is still a stronger object to make it attractive and useful to their Wives and Children. We believe that we can thus do some good in our day and generation; and hope to make the work indispensable in every well-informed family. We say *indispensable*, because in this day of cheap literature it is not possible to guard against the influx of what is bad in taste and vicious in morals, in any other way than by furnishing a sufficient supply of a healthy character. The mental and moral appetite *must* be gratified.

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Washington, 27 Dec., 1845.

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J. Q. ADAMS.